

TM AND CULT MANIA

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TO
ALL THOSE PUBLISHERS WHO THOUGHT
PRINTING THE FACTS IS NOT PROFITABLE

PREFACE

Transcendental Meditation has achieved international recognition through commercial exploitation, poor scientific procedures and the promise of wonder words as solutions to personal problems. Claims of the TM effects are neither unique nor special but are consequences of procedures associated with suggestion, placebo reactions, simple relaxation, neurotic belief and the mislabeling of vague emotional experiences. In this book, we investigate the precise psychological and social procedures by which this movement manipulates human behavior. These techniques have been and will be used by large political and religious machines to control human populations. Their understanding is imperative.

This book includes an in-depth analysis of TM. Although TM is the primary vehicle of evaluation, the existential themes, commercial ploys and psychological manipulations are prevalent in any cult behavior. No doubt the experienced reader will realize that the term "TM" can be substituted throughout the text by all types of cult-like movements.

Along this cult continuum lay potential movements in various stages of development. Some, such as TM, are now regressing into a quiet, resolution stage. Others, such as the Jones and Moon cults, have peaked, often with tragic consequences. Still others, like Bahai, Jehovah Witnesses, Christ Light and some recent radical Christian groups contain the explosive elements that could change them into cult manias.

The disadvantage of this book lies in its detail. It contains the blueprints and essential psychological principles by which human beings, no matter how clever or how experienced, can be manipulated at the gut level to contradict their personal and

public integrity. A person with a certain measure of charm and charisma could learn enough from this book to begin his or her own cult.

TM and Cult Mania details the basic methods of cult manipulation. The lesson to be learned is that cults are made from ordinary men and women. They are not special embodiments of good or evil. The cult mentality, with its intolerance and contempt for human potential, can strike at any time.

TM and Cult Mania was inspired by a series of debates at Laurentian University between the authors and the members of the TM community. The second author (Normand J. Carrey) is an ex-TMer, while the first author (Michael A. Persinger) has never been a cult member. The third author (Lynn A. Suess) has taken an intermediate stance.

With respect to the division of labor, the major literature review was completed by Normand J. Carrey. Chapters 1, 3, 4, 5, 6 and 10 were written by Michael A. Persinger. The remaining chapters were completed jointly by the authors.

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TM AND CULT MANIA

Chapter 1

INTRODUCTION

The Transcendental Meditation movement has attempted a scientific and social assault upon twentieth century western civilization. Since 1969, North America and Europe have been slowly shaped by a sophisticated promotional program that has promised increasing amounts of the fantastic and the bizarre. We have seen high schools, universities, and community meeting places adorned with attractive, professional posters claiming endless wonders of this simple and benign technique. We have seen the frenzy of TM conversion sweep across university campuses, with promises of higher grades, greater confidence and better personalities. For just a few dollars, people have been promised stress relief, mental quiescence and now the acquisition of awesome psychic powers.

TM is an excellent lesson in the patterns of cult manias. Throughout this text, the terms TMer and TM can be substituted in most instances by a more general term: CMer (cult-omaniac) or CM (cult mania). CMers are not necessarily odd or weird people. They are most frequently recruited from the ranks of the ordinary population; their conversions are often quick and complete. In this book the personality and problems of the CMer, as manifested within the specific symptoms of TM, will be exposed.

TM: Trick or Treatment?

Does TM really have the potential claimed by its adherents? Can the practice of TM in communities really reduce the crime

rate and produce the so-called Maharishi effect? Does the repetition of the mantra really enhance one's ability to control stress? Can the philosophies of the Maharishi open the paths to transcendence? Has the Age of Enlightenment really begun? Or, is TM a social symptom of our time, a magnificent sugar pill that will die away like the hundreds of other fads and fallacies? Is TM really unique? Without the pretty words, personal warmth and the ever present human expectation is TM really that effective?

In this book, the TM movement is investigated from several perspectives. The technique of TM is treated within the framework of modern science in order to determine the validity and realistic nature of TM claims. TM is viewed as a social and historical phenomenon, to test its similarities with the past. The poetry and philosophy of TM is posited as well and then challenged from realistic references. Are the semi-understandable sayings of the Maharishi mere word salad that lose their luster when translated into realistic, testable terms? Are they so general that they are also meaningless?

Since people—the millions of us that fall within the normal distribution curve of everyday living—are the critical ingredients to any social phenomenon, the problem of personality is discussed as well. Are there certain personality types prone to TM-like movements? Are they the same type of people who, century after century, concentrate their energies and lives into utopia-promising social events? Are movie stars, great scientists and politicians any more or less susceptible than the average person to the omniscient social powers of peer group pressure?

The basic premises of TM are challenged directly and frankly. Is the metaphor of TM as a benign technique more aptly described as a malignant manipulation for some people? Is it really safe? Is the mantra really required or is this also another rip-off? Are some of the claims and disclaims of the TM organization blatantly misleading? When the TMers say that they are not a religion, yet they have all the basic patterns and procedures, are they any different from a believer in Marx and Lenin claiming he/she is not a communist? When one removes the

enthusiasm of expectancy, suggestibility and the undying human propensity to believe in something, are the supposed effects of TM any different from those claimed by far-out cults or orthodox practitioners?

The problem of TM deserves special attention. Unlike parallel movements, such as the Moonies and Scientologists, the TM phenomenon is not conspicuous by its anti-social or radical nature. The TM organization has utilized the powerful and accepted modes of persuasion. Television testimonials by actors and actresses, impressive scientific data from respectable research institutes, and well written, simplified books by psychiatrists and physicians have been exploited. Unlike other movements that propose to radically alter society, the TMers offer a passive incorporation within society, buttressed with smooth and effortless metaphors. The TM organization has promised to become institutionalized within the mainstream of twentieth century activity.

But within this apparent calm and great promise, there is also great power. In the name of TM, we have seen logical, critical thinkers fall prey to common emotionalism. We have seen priests confront the church and children criticize their parents. We have observed students, previously introverted and low achieving, explode into TM enthusiasts and suddenly develop academic dedication. In the name of TM, families have been split and friends have been made. We have seen conversion manias strike campuses like epidemics and we have seen the aftermath, the ones who didn't make it. We have listened to convert after convert, each with his/her own private miracle.

Ironically, the TM movement has employed the same techniques used by the various political machines of the past. To the problems and worries of the present, they have offered glittering generalities of future utopias. They have discussed World Plans, Governors of the Enlightenment, and global expression. They have attempted legalization of TM within the school systems so that the impressionable child can absorb the basic principles. They have designed progressive and self-perpetuating programs within which the convert progresses from mere repe-

tition of the mantra to the sacred possibility of experiencing communion with the Maharishi. All of this has been done for the sake of the masses.

Whether these claims are the consequences of a naive but good-willed old man and his bewitched disciples or the cold, concise calculations of a vast money-making machine is not relevant here. Instead the principal question is, does it really work when all the fancy words, committed scientists and adolescent enthusiasm are removed. Or is TM just another social facilitator that has tapped the powers of the human animal immersed in a complex world.

How Will (TM) Believers Respond to This Book?

Response sequences of believers in situations that deny or fail to reward their basic assumptions are predictable. Depending upon the percentage of total daily time involved with the belief, the frustrated believer: (1) displays initial autonomic arousal and increased verbal activity towards the source of frustration, (2) attempts complete rejection or avoidance of the denial source, usually by means of discrediting, and/or (3) relies heavily upon the last ditch saving ploy of personal proof—"you have to experience it to know it." TM believers would be expected to follow the same patterns.

Autonomic arousal (emotional change), aggressive outbursts (verbal or muscular) and increased verbal activity or frequency will be the initial response pattern of unstable TM believers. These individuals are characterized by histories of (1) continuous rewards whenever TM statements had been made; (2) high frequency of these rewards within a short time, in the order of months, with little punishment or denial, and (3) emotional commitment of total life style to a simple ritual. As children or adolescents, these individuals will have had a strong and personal tie to religion within which their major death fears, identity crisis, and social definition had been resolved.

The autonomic arousal will be manifested in the usual low level distress symptoms such as facial flushing, increased general

body moving and finger tapping while reading, and a feeling of frustrative helplessness. The person may feel flabbergasted that "this book could be so wrong because there are so many good things about TM." If threatened by the possibility of TM's limitations, he/she may find himself/herself flooded by thoughts of counterarguments learned in the movement. In fact, TM believers will spend more time engaging in private reveries and rationalizations to "neutralize" the presentations of the book, than in actually reading the book.

If the frustration is severe enough and the individual has generalized most of his/her emotional behavior to the TM tenets, actual vocalization may occur. In addition to the head-shaking, grumbling and occasional recruitment of this book for a ballistic experiment, cussing, counting or some other frustrative vocal behavior will occur. For the believer whose behavior had not been completely faded within the control of TM stimuli, the barrage of denial sequences will evoke long periods of private soliloquy.

The initial frustration of the emotionally labile believer will involve the above components, although their display will be quick and frantic. The head-shaking, grumbling, counter-thoughts and verbal utterances will reach maxima early in the book. Just a few pages of persistent denial and implication will be sufficient to terminate reading. As this work is placed back into the book rack or placed beneath the toilet paper, these individuals will begin to display stage two of frustrative behaviors.

The avoidance and rejection stage of believer behavior occurs following the frustrative storm. Prolixities and emotional appeals of TM greatness no longer form the major expression. Instead the TM believer will attempt to dismiss, discredit or avoid the source of frustration. The book will be called "un-informed," "prejudiced," or "lacking enlightenment." Less diplomatic descriptions will involve terms like "garbage" or "cold and behavioristic."

Particular forms of avoidance or rejection will depend upon the TM believers' major defense against anxiety-provoking stim-

uli. Those who rely heavily upon group pressure and peer group sanctions will terminate reading the book after the first few chapters; they would never read the book after it appears on the "sacrilege book list." The more arrogant, vindictive types will merely dismiss the book as trivial by evoking their primary defense mechanism: superiority. They can be expected to say, "Nothing can stop us now," or "Who are these trivial people?" Invariably, the sequence is punctuated by the sarcastic grin of the one who knows all things.

Since the arguments within this text cannot be refuted objectively, TM believers will attempt a more vigorous form of rejection: direct attack upon the authors. Within this behavioral format, the authors will be called bad guys who use the same "sell" techniques we have discussed. Our status will be questioned with references to our training, credentials, or university. Qualified with the tired old, "They're only Canadians," insult, any piece of heresay will be used. This technique is not new to TMers; they used it well on Otis.

Direct confrontation with this book during TM sell periods, will elicit rejection modes. None of these can be vocal or emotionally expressive since such behavior deviates from the "keep it cool" claims of TM. When TM believers are confronted by our questions, they will avoid them altogether by changing the subject or giving the old condescending semi-relaxed smile of, "Well, you read what you want, but I'm offering you the universe."

When tired from the eroding counterargument and disclosure of TM trickery, the TM teacher and believer will evoke the, "You have to experience it to know it," appeal. Through this clever argument, the onus of the problem is shifted to the listener or viewer. Based upon the assumption that each individual considers himself/herself unique, this technique is another form of the pseudo-democratic "Let the people decide for themselves," manipulation used by journalists and conmen alike to feign fairness. It gives the argument a hint of objectivity.

The, "You have to experience it to know it," argument is indeed hard to refute objectively since it would demand serious

questions of each person's own validity. Terms of reference are invariably cast within personal experience as can be seen routinely everyday. How many times have you heard people say that "this or that is true because *I* have seen it," or "this or that is not true because *I* have not seen it?" The big number one—the egocentric reference—is the primary basis for judging reality.

It is a safe argument. People are not likely to admit the possibility of their arbitrary nature; the consequent anxiety would be incapacitating. Since a person's memory and experience are used as fundamental references for evaluating new events, changes or peculiarities in the memories or experiences are difficult to detect. The possibility that these private experiences are erroneous, illusionary or subject to massive changes, would indict the person's concept of self. By relegating an argument to the mode of "you have to experience it," the proof is placed upon the cherished and safely guarded belief in individual validity.

Objectively, the "experience is proof" arguments are futile and unrealistic when extrapolated to their necessary ends. The single human being cannot experience every detail of possibility within a life time. In this complex world of technology, we are forced to accept the results, observations and conclusions of other people. Excessive "proof by personal experience" demands travel to Siberia to be sure that it's really there, consumption of strychnine to test if it is really poison, walking through a firing squad to prove invisibility, jumping off a tower to demonstrate levitation. . . .

Chapter 2

THE TM MOVEMENT: “SAME STUFF, DIFFERENT BAG”

The methods and claims of transcendental meditation as defined by the Maharishi Mahesh Yogi are not unique. The essential procedures involved in the mantras, behavioral rituals and expected effects have been used for centuries. Movement after movement has used these same techniques to convert human masses. The leaders of these movements have profited monetarily and socially; some have achieved great political power. They have promised their followers powers beyond their wildest dreams. Claims have been made of invulnerability, protracted good health and spiritual transcendence. Most of all, they have promised an escape from everyday monotonies and an easy access to cosmic meaning.

Every generation with its limited scope of human time has considered itself special. Each generation depicts itself as somehow different or better than those before it, with problems that are more important and more complex. “Wars and rumors of wars”—a prognostic of an ancient apocalypse that never came—are seen by each period as somehow the real and final sign that the end is near. From this basic egocentricity of human behavior, it is not surprising that this generation’s mode of transcendental escape—TM—is considered unique, special and full of potential. However, TM contains the same old themes dressed in the metaphors of the 1970’s. The novelty lays within the clever use of this generation’s vehicle: the electronic media and all of its ramifications.

TM-Like Movements: Symptoms of Social Change

The search for self-identity has been one of the most persistent historical themes of human verbal behavior. During normal maturation, when the identity crisis becomes a central issue, the individual attempts to differentiate himself/herself from the immediate society. If predictable and specific options are available to the emerging social being, adjustment to the new roles and expected patterns of behavior is completed with little disturbance. There is no further requirement for persistent self identification in these situations, except for the final resolution of personal death. The person's concept of self is defined by the rewards, punishments and social demands of the society. Within the warm, personal matrix of these social situations, from local group to large culture, self and society are clearly defined.

Societies have not always been maintained in a steady state. Western culture, for example, has proceeded through tens of sudden and protracted changes in social demands. During these periods, expected patterns of reinforcement schedules, the events or conditions that maintain the complex behaviors of individuals within the culture, have changed radically. Traditional modes of responding become ineffective and the person is placed within an environment of social uncertainty. If the person's definition of self is heavily dependent upon conventional social roles and response patterns, then this uncertainty can induce foreboding feelings and a tip of the tongue sensation "there there must be something more to life."

Initially, the majority of people within the changing culture display an exaggerated response towards the maintenance of traditional values. Cultural institutions that specify and define the society become glorified and sometimes even deified. Rabid ethnocentrism may pervade the entire social stratification, culminated by an unusually rigid and intolerable conservatism. Within this context, conformity is emphasized and minute alterations in social pattern are punished. Cultural paranoia, a predictable consequence of these conditions, may

germinate contrived external threats from other nations or societies.

If the daily reward and punishment schedules of the individuals composing the society are disrupted too quickly and permanently in the direction of greater privation of essential reinforcers (food, warmth, clothing, income), then clear frustrative aggression results. Members of the society attack the areas previously associated with the delivery of rewards, such as banks, factories, and the human symbols of social order. Such aggression can lead to revolution and brutal social change.

During periods of imminent or expected social crisis, counter cultures emerge. These antinomian movements, as described by Adler (1972), attempt to re-establish stability between the individual's concept of “self” and the required patterns of cultural interaction. Distrustful of the “established” social institutions of religious, political or poetic expression, the members of these counter cultures insist upon personal direct access to social reinforcers such as God, political control and self-identity. Anti-intellectualism and a search for new mystical experiences pervade these movements. Through marked alterations of sensory stimulation, the antinomians attempt to set new boundaries for the “self.”

Since the established form of a culture usually controls the effective tools of its science, engineering and medicine (that are heavily dependent upon contrived, complicated ritual and some form of intrinsic logic), counter-cultures insist upon simple, anti-logical modes of inquiry. Faith and experience alone are considered sufficient proofs of reality while systematic and logical investigation, pragmatic consequences of cultural survival, become symbols of oppression and loss in personal freedom. Within such spontaneous life styles, susceptibility to integrating random and untestable private experiences increases and attention soon turns towards superstition, anecdotal reports and the occult.

Segregated from traditional tools for mastering the society's gods, medicines and formulae for adjusting to the world's unexpectancies, counter-cultures invariably develop some form of

personal meditation technique. These techniques have been used for thousands of years and still contain the same simple rituals. The ancient Greeks concluded that a quiet environment, a passive attitude, a proper posture and concentration upon an object were essential for mastery of the self and communication with true images or "thought forms." Medieval scholars practiced "recollection" during which time they reportedly organized their thoughts, ignored external stimuli and concentrated for extended periods of time.

Herbert Benson's extraordinarily thorough investigations of historical antecedents of TM (1975) aptly depict the persistence of meditational demands. Benson reports the works of an anonymous twelfth century monk who suggested the following technique for "god consciousness." After selecting a one syllable word such as "god" or "love," the person is supposed "to clasp the word tightly to the heart so that it never leaves it no matter what happens." With this word, one is supposed to "strike down thoughts of every kind and drive them beneath the cloud of unknowing." Such procedures are strikingly similar to the instructions of the TM teacher after the mantra is allocated: "When thoughts interfere with the meditation, return to the mantra."

Throughout the ages, poets have been frequent users of meditational techniques. Wordsworth and Tennyson, for example, also described meditative states similar to the TM experience. Wordsworth emphasized a passive attitude, free from distracting objects where one could reach "a happy stillness of the mind." With habitual training, one could experience the "central peace subsisting forever at the heart of endless agitation." This passage is almost identical to the descriptions from the Maharishi concerning the "stillness of mind and refinement to subtler levels of thought."

Allusions to private experiences reminiscent of cosmic consciousness have been frequently paired with meditational conditions. Whereas monks repeated the name of the local gods, others have used their own names to achieve similar experiences. Tennyson allegedly achieved states of ecstasy by repeating his own name. According to this poet, "The individuality itself

seemed to resolve and fade away into boundless being, and this is not a confused state but the clearest of the clearest, the surest of the surest, utterly beyond words” Multitudes of counter-cultures and evangelistic movements have employed meditation to gain their conception of god consciousness.

The use of meditation, although a central differentiating property, has been only one feature of the antinomian movements in the last five hundred years. The gnostics, who arose in various forms before the seventeenth century, demanded immediate knowledge through spiritual or mystic truths that were attained through faith and experience alone. They maintained a life-long search for “the new man” and a condition of steady-state ecstasy. Strict conformity to the group, frequently controlled by a charismatic leader, insured group-oriented events and a continuous discontentment with the “outside” changing world.

One of the most successful antinomian movements of this millenia was romanticism in its general form. This movement can be viewed as a response to the compulsive rationalism of the Enlightenment that was gradually removing personal access to fundamental social institutions. Precipitated by the fracturing social crisis of the industrial revolution, the French Revolution and the Napoleonic wars, this movement emphasized the importance of truth achieved through emotional, mystical and ecstatic experiences rather than systematic evaluation. Intuition was considered superior while rational deduction was labeled vulgar and restrictive. To the romantic antinomian, vague emotionally charged “absolutes of nature” served as constant stimuli of pursuit.

A vivid example of the romantic antinomian was Les Bouzings. As described by Adler (1972), these individuals were born within the disastrous years of the Napoleonic wars. Faced with a reinforcement history of uncertainty and social crisis, these protohippies of the early nineteenth century turned to sex, drugs, bizarre religions and the cultivation of eccentricism. They drank from human skulls and danced naked in the streets. To portray a condition of constant passion, they ingested drugs

that dilated the pupils. While thousands died from an epidemic, they danced in outlandish, clashing clothes to the rhythmic beating sounds of the Galope Infernal.

When kicks were hard to find, these antinomians of the 1830's turned to meditation, altered experiences of the self and pursual of the occult. They attempted to define the self by starvation, through repetition of words and by ingestion of psychotropic chemicals. Inundated by social stimuli over which they had little control, the Les Bouzingos pursued the "absolute, the ever present and the never changing." Somewhere there must have been order, meaning and realization of the self in context of the universe.

The Coue Treatment: Turn of the Century TM

There are always representations of the antinomian personality. When social crises are minimal or isolated to a small portion of the population, the antinomian occurs in an obscure form such as the beatnick or bohemian. One such mini-movement that shares amazing similarity to the ritual and social dynamics of TM was the Coue treatment around the turn of the century. Developed by the French pharmacist Emile Coue, the method depended upon procedures of repetition, suggestion, personal testimony and social facilitation. Unlike the TM movement, the Coue movement did not evoke explicitly the pursual of some form of god consciousness.

Like so many other social movements, Coue's treatment began by a harmless observation of the "sugar pill effect." Initially, Coue discovered that the mere addition of positive statements (suggestions), to usual pharmaceutical prescriptions increased his patients' chances of recovery or at least seemed to hasten the healing process. This simple procedure coupled with Coue's amazing enthusiasm was powerful enough to initiate a full blown evangelistic movement. Within the fervor of the excitement, new converts, among them prominent scholars and notables of the day, gave passionate testimonies concerning the personal effectiveness of the Coue treatment. The public

appeared ready for another panacea that promised to cure its various psychosocial ills.

The basic paradigm of the Coue technique had to be simple in order to appeal to the majority of the population. Coue wrote: "Every morning before getting up and at night as soon as you are in bed, shut your eyes and repeat twenty times in succession moving your lips counting mechanically on a long string of twenty knots the following phrase: "Day by day in everyway, I am getting better and better. Do not think of anything in particular, as the word 'everyway' applies to everything." Extra procedures concerning the proper environment included, "Shut yourself up alone in a room, seat yourself in an arm-chair, close your eyes to avoid distraction and concentrate your mind for a few moments thinking 'Such and such a thing is going to disappear' or 'such and such a thing is coming to pass'."

One can see immediately the multitude of similarities between the Coue treatment and the TM rituals. Their common elements, like other techniques before them are: (1) adoption of a passive attitude, (2) isolation in a quiet environment, (3) some process by which the sensory field can be confined or isolated (such as the repetition of phrases or mantras) and (4) expectancy of relief. Although common, they must never be considered trivial. To a population unfamiliar with being alone or unaccustomed to just sitting quietly, these procedures can produce potent, but transient, psychosomatic changes.

The Maharishi and Coue doctrines demonstrate several parallels. Coue boasted an unlimited source of power in order to attract his adherents while the Maharishi has contended cure-all claims and the more recent paranormal promises. Coue's doctrine states that *all* suffering and sickness are a result of bad autosuggestions while the Maharishi maintains that all suffering is caused by stress in the nervous system. Coue believed that the key to man's problems was the dominance of the will over the imagination while the Maharishi alludes instead to the mind functioning at grosser levels of thought. Coue contended that imagination is normally uncontrollable but that with his

technique one could harness and give direction to this dynamic source. Maharishi says that the mind without TM works at crude levels but with *his* technique one can operate at more subtle levels of thought.

Both men refer to abstract concepts that are difficult to quantify and hence hard to refute. Although neither Coue nor the Maharishi ever operationally defined their concepts in realistic terms, they did express them in quasi-mathematical formulae indiscriminately borrowed from the pop mathematics of the day. For example, Mr. Coue stated that in the conflict between the will and the imagination, the force of the imagination is in direct ratio to the square of the will. Similarly, TMers express "higher brain functions" in terms of correlations from paper and pencil tests forced within a vague quantum mechanical framework of consciousness. Theoretical models superficially compatible with the Maharishi's poetic statements are used to buttress the scientific claims of the investigations. When failures occur, both techniques place the onus upon the person engaging in the ritual rather than the ritual itself.

The disciples of both the Maharishi and Coue have displayed intense evangelistic zeal. They have seen their movement as a great benefit to mankind, and have said that everyone should practice their particular doctrine. They have failed to see how anyone could refuse such a "great bargain." When this "great bargain" was refused, they have considered the refusers to be stupid, inferior or unenlightened. Within the fervor and comradeship of group affiliation, they have frequently become intolerable to other options of explanation and have adopted totalitarian attitudes. The superiority of the immediate group then blends into a general disdain for any one who doesn't believe.

In both movements, there were repeated claims of cures to psychosocial ills. Unfortunately, most of these cures were associated with diseases prone to placebo treatments or spontaneous curing. Like TM magazines, the files of Coue institutes were filled with claims of cures for neurasthenia, anxiety and psychosomatic disorders. Coue also claimed the technique

cured tubercular lesions, stopped hemorrhages and caused fibrous tumors to disappear. Other cures claimed were the elimination of paralyses of the lower limbs (with no controls for hysterical conversion), "epilepsy," bronchitis, anemia and heart stoppages.

The clients of TM and Coueism were selected heavily from young people and from adults who suffered chronic psychosomatic problems. The latter population usually appears for treatment only after years of orthodox procedures have not produced the desired result, frequently because there is no organic basis for treatment. Within the enthusiasm and personal warmth of both movements, these individuals frequently displayed sudden recovery. Although emotionally impressive, these movements have given no estimate of spontaneous recovery (without treatment) and have not published data on long-term cure stability. When the percentage of spontaneous recoveries in populations waiting for the therapy are similar to the recovery rate of people receiving the treatment, the movement changes from science to superstition.

The Emergence of TM

The sudden, epidemic-like spread of TM and related movements in the late 1960's and early 1970's within Western civilization is a predictable consequence of social change. This change, initiated by the massive alterations in traditional values and reward/punishment schedules following the Great Depression and World War II, pushed North American society into long-term disequilibrium. This instability, agitated by the exponential increase in technical knowledge and social complexity, still continues.

The first phase of the instability began after World War II when the North American populations returned to an urban-oriented society. Within the affluence of post-war spoils, the children of the depression expected an open-ended option to their deprived dreams of wealth and materials. Houses were built, cars were bought and families were conceived. *Look*

late 1960's and early 1970's. In an environment of consumer packaging where a decade of songs was available at \$12.95 and musical proficiency could be achieved in ten easy lessons, these new cults promised to bring the identity-starved individual culture via great books, bliss in seven steps and a new personality. To a generation razed by social unrest and political assassination, they milked the media to promote sales. To the myriad of floundering youths, they promised a utopia for all mankind.

TM can be seen as a movement catering to the needs of these people lost in the post-hippy era and still suffering from the prolonged symptoms of a shattered "self." Whether by human contrivance or through social demands, TM allegedly offers the solutions to a variety of personal and social ills. To the person who suffers social alienation, it offers the cohesion of peer group pressure. To the individual who suffers personal isolation, it offers a sublimation to a greater and more potent knowledge. To the person who feels that there must be more to the self, it alludes to a better and expanded state of "self-ness." To the social animal that demands a replacement of meaningless and tired religious practice, it provides a personal facet for genuine experience.

The TM Success

One cannot stereotype the TM movement as "just another splinter group." This movement has displayed clear and definite adjustments to the new social demands. TM social organizers have responded well to the temporal and social factors of the day by instituting a number of important characteristics within the organization's structures. These characteristics include: (1) the acceptance of heterogeneous social standards within members of the same generation, (2) an apparently compatible compromise with today's objective truth (science), (3) an implicit concept that can incorporate any philosophy of life, especially capitalism, (4) a watered-down psychotherapy, and (5) the involvement of vocal academics with access to

impressive scientific apparatus and social dissemination.

The heterogeneous life standards acceptable to the TM philosophy, at least initially, can be seen with any group of TM novices. During the early days of feverish TM recruitment, long-haired hippies could be seen sitting beside academic “straights.” Devout Christians listened with professed atheists. Middle-aged businessmen with pragmatic values sat beside adolescents who were determined to change the world. Peripherally, all seem to have found a happy marriage between Eastern values and Western materialism.

One can detect within the movement a flavor of rationalism finely mixed with emphasis on emotions and intuitions, in many ways similar to the early gnostics. The Maharishi insists that his meditational states can be verified by science (rationalism) but at the same time he emphasizes the importance of inner experience, which cannot be verified as easily. Within the format of this peculiar postulation, TM scientists have engaged in sham research. They have intended to “scientifically prove” the nebulous and indefinite statements of the Maharishi by spanning vast conceptual distances between concise data and the diffuse wonder words of mystical philosophy.

TM deviates from other gnostic groups since it attempts to work within the established order. Indeed, recent court and legal actions over TM practice in schools in several states clearly demonstrate the attempts to become institutionalized within that order. A primary selling point of TM has been its alleged usefulness for adjustment to the varied “excesses and stresses” of Western capitalistic society. TM posters implicitly promise increase in profits, better sales ability and an escape from the threats of hypertension or ulceration, without giving up one’s old belief systems. The suit of the businessman and the sound of coins are more typical of the TM movement than simple dress, self-sacrifice and poverty.

TM can be viewed as a half-breed between a psychotherapy and an evangelistic movement. In most psychotherapies, the primary operation involves the modification of the patient’s behavior after an initial diagnosis, towards some criteria estab-

lished by the therapist who usually mediates the morés and values of the culture. Since discrepancies between the patient's behavior and how he/she is expected to behave are considered a major source of the person's problems, attempts are made to teach the client methods by which the problems can be confronted and solved. A therapy is considered "successful" when the patient begins to solve more and more personal problems.

With TM, the "diagnosis" is usually made within a few minutes, after which the person is told directly or by implication that his/her personality problems have been evaluated and that a special method can solve these problems. The "special method," one of a handful of mantras, is then applied indiscriminantly over all psychiatric and normal diagnostic categories. Unlike other therapies, however, the successful TMer relies heavily upon vague dynamics of the meditational process rather than direct modification of specific aspects in the problem behavior. As the TM method becomes a regular portion of the person's behavior, greater and greater reliance upon the "benign and natural properties," of this vague process is emphasized. Even side effects from simple relaxation, a procedure used in most psychotherapies, are interpreted within the context of the TM experience.

The evangelistic portion of the TM therapy is seen within its long-term goals and social processes. TM has a definite conversion purpose such as God realization or some related "cosmic experience," as the Maharishi has said. Similar to other evangelistic movements, the converted individual can channel his energies into volunteer work involving active propagation of the TM belief system to his/her peer group. There are also group meditations, followed by social discussions, climaxed by taped monologues from the Maharishi himself. During this period, the TM teachers reiterate and reaffirm the basic tenets of belief and attempt to remove the final questions and doubts from the initiate. The infallibility of the doctrine appears to be a major emphasis.

One of the most potent factors associated with the rise of TM

to the social status it now enjoys has been the involvement of the vocal academics with access to scientific media and social dissemination. These academics, who have often made a personal commitment rather than a scientific study of TM phenomena, are bolstered by the impressive aura of complex instrumentation and cryptic terminology. Accreditation by association with the scientific status quo is a persuasive technique of sell-power. Although the deification of science in our society is prevented by criticisms of ethical roles and relevance, the populace appears to have a persistent interest in the comments of men who discover the secrets of the universe.

Indeed, the TM movement shares many of the properties of an antinomian movement. It displays creeds of strict religious following, a persistent search for “the new man,” a charismatic leader, an emphasis upon group conformity, and a pantheistic fusion of god, religion and mysticism. Although they are routine patterns of rebellion against perceived intolerable established orders, these behaviors contain dangerous propensities. According to Adler, the antinomian movements, through the very properties that vitalize their existence, are prone to totalitarian movements wherein subservience to a guru or charismatic leader becomes likely. Such blatant extremes can be seen in the Charles Manson group and to a lesser extent in the Divine Light and the Children of God movements.

Historically, TM is not innovative. With the exception of its economic organization and relatively expensive initiation fees—now approaching the cost for primal therapy and Scientology—TM offers little new information to the populace. The only novelty of the TM effect is the generation ready to receive it, a population that has not been exposed to the myriad of similar movements now buried in forgotten archives. TM has taken old and tried procedures and has placed them in different contexts labeled with popular words and attractive sales slogans. However, this procedure may still have some positive effects. Despite all the fancy words, a rudimentary operation may be involved. What are the data to support this possibility?

Chapter 3

FLAWS IN THE TM EXPERIMENTS: A CRITICAL EVALUATION

A significant portion of the TM movement's prestige and popularity is based upon the alleged scientific proof of its *unique* and significant psychophysiological properties. In a society where science has replaced religion as the structure-maker of a complex environment, the rituals of the laboratory and the statements of men who call themselves scientists have acquired magical power. Great faith and often indiscriminate reliance are placed upon numbers, graphs, statistical tests, probability statements and complicated jargon. These phenomena are the consequences of specific procedures that are used in the laboratory. Such procedures are the basic tools of scientific enquiry, but their complexities may not be apparent to the person without sufficient training.

By themselves, these procedures are sound and the data collected through them are, for the most part, reliable. The problem lies within the interpretation of the data. Data profiles can be interpreted many ways, depending upon the experimenter's assumptions or beliefs about the nature of the phenomenon. The sentence, "The TM group averaged fifteen points on a particular performance test while the non-TM group averaged five points," is a data statement. The sentences, "The TM group showed superior performance," or, "TM procedures produce superior mind-body coordination," are not data statements; they are interpretations involving value judgments. Implicitly, such statements suggest that a different

score displayed by the TM group is a better score and that a single result can be generalized to many tasks.

Within the enthusiasm of an idea, a scientist is less likely to isolate or control for the possible artifacts of his procedure, especially if the artifact might involve the validity of the phenomena in which he is interested or in which he believes. A simplistic example of artifact can be seen in the following instance. Suppose you lift a ten kilogram horseshoe magnet thirty centimeters cm above the table surface upon which lies a thin glass figurine. If you dropped the magnet, the figurine would be smashed into many pieces. Indeed the magnet was magnetized, but to conclude that the magnetism of the object was responsible for the destruction of the glass figurine would be erroneous. Clearly, the primary contributor to the destruction was the mass or weight of the magnet. However, a person who believed that magnetism had large scale effects might not check the possible existence of the mass artifact and conclude that magnetism had broken the glass. Such problems, although more subtle and complex, are numerous in behavioral experiments involving human subjects.

Believers of the TM movement and the TM ritual have placed heavy emphasis upon experimental proof from the laboratory; they have tapped heavily upon the methodology of psychophysiological and psychological measurement. The proponents of TM have executed and collected tens of experiments that allegedly support the unique physiological and psychological consequences of the ritual. They have offered TM as a treatment to some of the undesirable medical, psychological and social changes of twentieth century Western civilization. Through their commercial presentation of experimental results and wide but scattered approach to data collection, they have implied a panacea-like factor in the TM practice. A detailed description of these experiments and the objective presentation of the results can be found in the Appendix.

The hundreds of experiments published by the TM organization are reminiscent more of testimonials dressed in scientific terminology than actual tests of TM. No controls have been

instituted for the consequences of merely sitting quietly for twenty minutes and repeating any word. No protections have been included against the enthusiasm of the TM convert in a situation that implicitly demands success. The problems of expectancy of relief, peer group pressure, suggestibility, pleasing the experimenter and indeed the biasing of the believer-experimenter himself/herself have not been eliminated. Considering the frequent lip service paid to the scientific age, it is strange that such fundamental flaws in experimental design have been overlooked.

Failure to Control for Set Effects

The effect of context or "set" upon the interpretation of the continuous input of sensory signals is extraordinarily powerful. Most of us have experienced the consequences of what we are thinking at any particular time upon the organization of ordinary stimuli. To the house noises that we ignored during the day, we may respond startled and with anticipation while reading a murder novel. The ordinary sounds of night creatures may be perceived as romantic compliments when we are with our favorite person. While reading a ghost story, these same sounds compose an elaborate fantasy that can be almost visual in manifestation. Even the ordinary visceral changes that exist as unpleasant sensations when we are happy can become "sure signs of a deadly illness," when we become depressed or read something about cancer.

The importance of the cognitive aspects of the situation upon private experience and upon the labeling of otherwise mundane internal and external stimuli has been demonstrated many times in the laboratory situation, especially if the subjects have been aroused by injections of adrenalin. Schacter and Singer (e.g., 1962), startled the scientific community some years ago by demonstrating that the same internal physiological arousal state induced by adrenalin could be associated with markedly different private experiences or "thoughts" depending upon the *social* context in which the person was placed. In-

dividuals who were injected with the adrenalin and then placed in situations where people were crying, felt sad and depressed. Those who were placed in social situations associated with aggression felt angry, resentful and ready to attack the experimenter. Those subjects who were placed in situations typified by laughter and frivolity experienced feelings of joy, elation and euphoria.

Schacter and Singer's studies verified an old theoretical conjecture concerning factors influencing emotional experiences: the context, verbal labels, and subtle social cues of an environmental situation are prime determinants of the detail and images associated with the private experiences displayed in these situations. Since then these important findings have been applied to many situations associated with emotional arousal and social contexts. For example, the expectancies and the behavior of other people within the illicit and hence fear-like (adrenalin) arousal of a marijuana party is more likely to determine the qualitative and intensive characteristics of the novice's private experiences than the cognitive aspects of a routine (boring) social situation. A variety of experiments have indicated that the novice's first marijuana experiences are heavily influenced by the social context in which the experiences occur.

The cognitive aspects of a situation are especially important in *novel* situations, since they are aroused due to the psychological and genetic characteristics of the human organism. Novel stimuli evoke autonomic and adrenalin related changes in the human being. These events frequently contribute to the important impact of "first impression" effects which are often determined by subtle social factors (cognitive aspects) that would otherwise be ineffective. In all these situations, the major impact is upon the "emotional" experiences rather than the logical aspects of the event. It is not unusual for people to evoke emotional referents or gut feelings when the situation is later recalled.

The initiate to TM is placed within a complex situation that is very similar to the conditions associated with the Schacter-Singer effects. During the training phase, an initiate is asked to

attend the local area TM congregation and to bring some trivial materials, such as fruit, a flower and a handkerchief, that from indirect reference by the prospective teacher acquire semi-magical characteristics. The basic format of the induction ceremony is not unlike Protestant procedures preceding baptism.

A significant portion of the initial training time for the TM experience is spent with the teacher. This segment of the initiation borrows heavily from the therapy situation. The TM teacher engages in a great deal of friendly, warm, eye-contacting behaviors. Constant emphasis is placed upon the powerful information that the initiate is about to receive, with implicit reference to the universe-is-about-to-open-for-you concepts. Prefaced by a consultation format similar to receiving the "secret handshake" or the "pass word" in other organizations, the initiate receives his/her mantra. The set is ready.

The structuring of the TM experience depends heavily upon the TM teacher's ability to give verbal labels of description during various stages of the initiate's first experiences, a situation very similar to the veteran marijuana user teaching the novice what to experience. In his book, *The Science of Being and the Art of Living* (1966), the Maharishi states, in an amazingly nonchalant manner that "the teacher must not only show the aspirant how to experience the subtle states of thinking but should also be responsible for checking these experiences as he proceeds on that path." Apparently, the Maharishi is not familiar with experimental social psychology, (e.g., Schacter and Singer), nor with the problems of language and human private experiences.

There is an implicit assumption within the organization that a bad first experience can make the person "miss the path to TM." Rephrased, inappropriate contexts and social sets during the initial exposures can produce private experiences not in accordance with the TM lore. Stated in a still more general manner, the largest part of the recalled details following TM experiences is associated with metaphors and descriptors given to the novice during ordinary autonomic arousal. To the normal sensation of movement—a typical occurrence

when one sits with the eyes closed—the TMers use the analogy of the bubble rising in the water or the poetic but nonsensical phrase “turning the attention inwards towards the subtle levels of a thought until the mind transcends the experience of the subtlest state of the thought and arrives at the source of the thought.” The normal sensation becomes structured by the details of the poetic images.

What would happen in the same mantra-humming situation if the cognitive aspects were not the Eastern-oriented, ascetic approach but were characterized instead by burning candles, black-hooded human forms, blood-curdling shrieks and a philosophy of soul migration? According to the laboratory results available to date, the person’s experience would be detailed by the environmental events. One would expect the novice not to experience the deeper levels of a thought, but the sensation that a ghost was nearby. One would expect the novice not to feel transcendence, but obsession or possession by incarnates. In short, the details of the experience would be determined in large part by the social context available during the emotional arousal.

From this point of view, the TM experiences, from the feelings of transcendence and ecstasy to the reports of levitation are merely illusionary consequences of the situation in which the experience takes place. There is little wonder that within the format of word repetition, the Moslems have seen Muhamed, the Christians have seen Christ and the many peoples of non-Western cultures have seen the images associated with their contexts for eons. The TM organization has responded to this problem with the usual self-perpetuating copout: “We cannot deviate from the age-old technique because it’s too dangerous.” Too dangerous? For whom?

Failure to Control for Expectancy of Relief

A long-term consequence of repeated presentations of the same social set or environmental context is expectancy, another important, human variable. Whereas immediate social or cognitive

stimuli can influence the person's ongoing thoughts and emotional experiences, expectancy variables can influence what the person will experience in similar situations at some later date. Frequently, this type of expectancy is a consequence of simple learning or conditioning. Such expectancies comprise the successful bases of social phenomena ranging from television commercials to the integrative nature of family life.

Examples of expectancy effects in our social environment are numerous and persistent; they can be either negative or positive. If dental work has been associated with extreme pain, then having the teeth touched (an otherwise uneventful experience), in the dentist chair is associated with great pain and aversion. If taking aspirin while experiencing a headache has been associated with relief, then just swallowing the pills can reduce the headache pain, long before the actual chemical is distributed in the blood stream. The psychological effects of expectancy are just as real to the person experiencing the events as those produced by other more direct stimuli.

The procedures of conditioning expectation are used repeatedly to sell products during commercials or to manipulate attitudes during comic episodes. A common commercial ploy is to spend several weeks conditioning the viewer to a particular jingle that ends with the promoter's name. During this period, the viewer is passively conditioned to the verbal sequences. The second step of the procedure is to present the same jingle but without the ending. When the viewer is exposed to the second step of conditioning, it is not unusual for him/her to "mentally" finish the jingle and reflexively elicit the promoter's name. The manipulation has been completed. By using the format known to be associated with comedy or jokes, such as, "Did you hear the one about the . . . ?" the promoter can induce the viewer to expect a joke or comic ending even though the actual punch line is not really funny but a part of the sales job. A conditioned audience laughs just as much and walks away pleased by how "good" the product must be.

Expectancy effects are especially important in situations that are novel, emotionally arousing and/or ambiguous. Experi-

ments involving *only* human subjective reports as the primary source of measurement for such situations are fraught with difficulties and errors. In these unstructured environments, the slightest associations (even something the person has read and forgotten) can provide intense and vivid experiences to mundane stimuli. These weak associations can be the essential basis for framing or patterning an unknown context. To the stimuli of graveyard gas, the person who expects to see the outline of a recently deceased friend, may report his outline in detail. To the same stimuli, a person who has not read nor heard about graveyards and ghosts may merely report shimmering phosphorescence.

The most difficult expectancies to accommodate clinically and personally are those associated with extremely diffuse but emotionally loaded words such as "death," "self" and "reality" and with powerful, conceptual phrases such as "the meaning of life," "the limits of the personal universe" and "there must be something more to life." These expectancies have highly idiosyncratic and vague images, the details of which always seem to be "at the tip of the tongue" or just beyond the boundaries of consciousness. Elimination or confrontation of these expectancies is very difficult. They cannot be challenged directly or empirically in a single, objective situation since the actual behaviors associated with these words/phrases are so numerous or diffuse that particular response displays are impossible. Since, for example, all the responses that comprise a person's concept of self cannot be displayed within a single space-time context, the associations of self are difficult to punish or reward directly.

The TM experience depends heavily upon the human capability to modify sensory interpretation according to expectancies. When the naive subject enters into the contrived learning schedule instituted by the TM organization, these expectancies are manipulated and enhanced. Indirect (inferred) reference is first placed upon the Western cultural concept of Eastern philosophies and occult practices, within which supernatural-like powers are expected. The dramatic association with Hollywood

productions and the best-seller novels that have made the Orient mystical are clearly evoked by the pamphlets depicting lotus positions, long robes and odd music. Like so many other diffuse expectancies, the person perceives the powers of Eastern abilities far beyond their objective boundaries. Possibilities of transcendental experiences, manipulation of time, teleportation through space and power-tripping with another person's behavior are conceived as realities. The magical thinking of infancy, long extinguished by the systematic and immutable consequences of everyday living, glimmers once again.

To this loaded background of diffuse, grandiose expectancy, the TM promise manipulates the great demon of human anticipation: anxiety. TM promises relief from the stress of everyday life, an escape from the humdrum of a structured world and a complete transcendence of confusing social complexities. The TM promise, much like the biblical attractant: "Come all who are heavy laden and I will give you rest," pretends a complete removal of anxiety-stress. To some individuals, such promises are as effective psychologically as real events.

The momentum of expectancy of relief increases as the initiate progresses through the various levels of TM development. Initially, the expectancy is simple reduction of stress and anxiety and the consequent availability of rewards denied by these conditions. The person expects better grades and more sociability. Within the powerful controls of these expectancies the person's work habits, study procedures and general approach are changed. Other therapies call this change increased self-confidence. However, the TM converts do not recognize the subtle change in their behavioral patterns, actually responsible for the new rewards, instead they allocate the cause and the praise to TM.

TM experiments have not controlled for these expectancy effects. For example, what would happen to the grades, personality changes and lifestyles of people who are given the mantra as a part of another therapy with no expectancy of relief? Would they still report the claims of TM enthusiasts? What would happen to subjects who enter the initiation procedure

and received the mantra but had not attended the two one-hour sell jobs on what great things TM can accomplish? Would they also report relief from their plights? Suppose that a more objective evaluation of TM effects was presented during the introductory lectures, demonstrating that the same physiological and psychological changes could be produced by a wide variety of different techniques, including ones already available. Would the young initiates still enthusiastically pursue the TM pathway? Without the jargon phrases of "thoughts finding subtle levels of thought" and the exaggerated contentions of uniqueness and this-is-it-world claims, would the anxiety-prone, hypnotic-susceptible, suggestible and gullable people in the audience still report the changes "in every aspect of their lives?" These critical tests have never been given in any of the TM experiments or experiences.

Failure to Control for Placebo/Suggestible-Prone Subjects

Most linguistic theorists would agree that the contents of thinking are a consequence of the language patterns acquired during the period of socialization. The child is born without precise verbal skills, although elementary communication can occur with repetitive motor skills such as crying, facial patterns and various postures. A large part of the child's word pool and the major portion of the reward or punishment systems associated with core words like "good" and "bad" are derived from the parents. During the first five to six years of a child's life, the parent stands as the primary source of reward and punishment. To the myriad of unspeakable and non-specific experiences, the parents give verbal labels.

These verbal labels are used to help retrieve and remember various episodes of experiences to which the person has been exposed. If the child who stares out the window, for protracted periods, has not eaten very much for several days and has referred repeatedly to a young blond pig-tailed girl at school, the mother may tell the child that he is "in love." In this manner, the word "love" is paired with the private and public experi-

ences. Later when the child hears the word "love" he may remember the rich variety of experiences associated with the word. Since private experiences cannot be viewed directly and overt behaviors (that the parents see and label) are not always related in a one-to-one relationship with those internal experiences, the same word can evoke a wide range of different and idiosyncratic experiences within a group.

With maturation, private thoughts are evoked more and more frequently by words generated by the person rather than the parents. However, some adults still are dependent upon the words of other people to determine their private experiences. The more similar these other people are to parental surrogates, the more easily the individual can be influenced. To the adult population, older, gray-haired males frequently have this property in general. Socially accepted father-figures are physicians, priests or ministers and heads of state. They all share one property: the ability to alter the susceptible person's private experiences.

The susceptible person has been studied for both scientific and political reasons. These individuals are prone to a wide category of phenomena including placebo effects, hypnotic suggestibility and commercial manipulation. They have the capacity to integrate suggestions from another person as if the instructions originated within themselves. Herbert Spiegel (1974) contends that these individuals consistently display what he calls the "grade 5 syndrome" which refers to hypnotic susceptibility and not schooling. Features of the "grade 5" personality are: (1) a readiness to trust, (2) a relative suspension of critical judgment, (3) a telescoped sense of time, (4) an easy acceptance of logical incongruities, (5) an excellent memory, and (6) a rigid core of private beliefs.

Even anecdotal or peripheral comments by a prominent person, a parental surrogate or a father-figure can influence the behavior of the susceptible person. Spiegel relates the case of a young man who visited a well-known neurologist. During the course of the discussions, the doctor told the young patient to get away from it all, to go to Alaska, and start again. The com-

ment had been intended as metaphorical, as an illustrative reference to a change in lifestyle. But when the patient left the doctor's office, he was reluctant to return home. Instead, the young man drove around thinking about Alaska, but then felt silly for the consideration. Two days later, he flew to Alaska and was relieved. A superfluous comment by the therapist became a powerful vector for the patient's behavior.

Intelligence and even knowledge of the area in question are not always sufficient protection for the susceptible person. Spiegel describes the case of a brilliant research-scientist with an I.Q. exceeding 180. The scientist is outstanding not only in his field of specialty but in his hobby: the commodities market, as well. Yet, this man might go to a department store and let an enthusiastic sales person convince him that the family needs, for example, a new refrigerator. Despite his academic training and understanding of the appliance market, he buys it without question.

The TM pathway is a natural attractor and container for highly suggestible people. With their readiness to trust, they pursue the suave TM teacher and the enthusiastic TM peer group. Through their relative suspension of critical judgment, the inconsistencies, limitations, and contradictions within the TM body of knowledge are ignored or rationalized. Because of willingness to accept logical incongruity, philosophical nonsense, such as meditating away bad weather or bad social vibrations, or "thoughts folding in upon thoughts," becomes possible. With their excellent memory, they can counterargue the average person with experiment after experiment of TM proof.

The objective reviewer of the TM phenomenon has no way of knowing at present what percentage of the TM converts would score highly on hypnotic suggestibility scales or be ranked as placebo reactors. We do not know how many non-suggestible people tried the TM method and quit. We do not know how many people who still remain in TM would quickly replace it with some other pseudo therapy if they were given a fair option. The possibility that the TM experience is dependent upon: (1) expectancy conditions and (2) individuals with particular

personality characteristics (of suggestibility) has been blatantly ignored by TM research.

Neither intelligence nor academic training are sufficient prophylactics against the untoward and powerful effects of suggestion. Does this mean that even the highly respected scientists can fall prey to placebo effects? Does this mean that some great scientists may also share the personality of the grade five syndrome? A possible example of this unfortunate consequence within the TM ranks is: Bryan Josephson.

Josephson's specialty was solid state physics in which he received the Nobel prize for the now famous Josephson junction effect. In this area, he is a powerful intellect. However, both his published and unpublished comments indicate to this author an unbelievable naiveté of the problems involved with human experiments. When the TM philosophy was threatened by Benson's challenge of the mantra, Josephson responded in a reflex-like manner with TM jargon and with a barrage of insults concerning Benson's scientific capabilities. In a letter appearing in *New Scientist* (December 4, 1975; p. 605), Josephson proceeded with the usual stock phrases of the TM believer such as, "To overcome these obstacles through mediation, it is necessary to activate the deeper levels of the mind containing those emotional factors from which these various types of limitations arise." The letter is a TM testimony and not the critical and senescent comments of a Nobel laureate.

Unfortunately, this episode is not the first time a great physical scientist without expert training in human behavior displayed a suspension of critical judgment and an acceptance of logical incongruities in an area with which he was less familiar but felt personal commitment. How many great scientists of their day followed the banner of Coueism, fell gullible to the trickery of the séance room, or argued that a life from one nation was superior to that from another?

TM is not a Unique State of Consciousness

The Maharishi described the TM technique as "turning the

attention inwards towards the subtler levels of a thought until the mind transcends the experience of the subtlest state of the thought and arrives at the source of the thought." Although some people may consider these semantics entertaining prose, their usefulness for experimental work is questionable. In his foreward to the large, bulky conglomeration of pro-TM experiments, the Maharishi further states that TM is a pure consciousness and that it is a unique state of consciousness. These statements were lifted from the Maharishi's prose and translated directly into quasi-scientific terminology by Wallace who insisted that TM produced not only a unique state of consciousness but a *wakeful hypometabolic state*. Neither psychological nor physiological data support these beliefs.

In Chapter 2, TM was compared to a few of the procedures used for centuries to achieve mystical states. TM is neither unique nor special in this respect. All of these movements share common elements of so-called mystical consciousness. Davidson (1976), who quotes the philosopher Stace, lists these elements as: (1) deeply felt positive moods described as bliss, peace, love, etc., (2) the essential experience of unity or union which can be expressed as a oneness of all things or with all things, (3) a sense of ineffability, (4) an enhanced sense of reality, authenticity and meaning, (5) alternation of space-time perception associated with a feeling of transcendence of spatial-temporal boundaries and (6) the ability to accept propositions that in normal behavior would appear contradictory. These experiences can be induced by techniques available to all cultures and have been expressed in hundreds of metaphorical or poetic forms. They are also characteristic of reports displayed by the psychiatric population, during psychedelic intoxication and among believers in the occult.

The absence of psychological uniqueness does not necessarily eliminate TM's potentially unique physiological conditions. However, the data clearly indicate that TM periods are neither homogeneous nor unique physiologically. The so-called meditation is associated with periods of sleep and not continual "wakeful hypometabolic conditions." Younger, Adriance,

and Berger (1975), found that experienced meditators displayed waking alpha during about half the meditation period; the remainder of the meditation period was spent in drowsiness or Stage II sleep. Similar reports were noted by Pagano, Rose, Stivers and Warrenburg (1976), who studied TMers with 2.5 years of experience. Results from ten sessions with each mediator indicated that 39% of the meditation was associated with wakeful EEG while 40% of the meditation was associated with sleep stages II, III and IV; the remainder of the TM periods accompanied electroencephalic displays of drowsiness.

In both the Younger, et. al. (1975) and Pagano, et. al. (1976) studies, the TM subjects were either experienced meditators or TM teachers. After the experimental periods in which the unambiguous sleep or drowsiness had occurred, the subjects reported a *normal* meditational experience. The reports of feeling refreshed and rejuvenated indicated the usual TM experience. Apparently, the subjects did not realize they had been asleep or drowsy. Although they may have felt as if the mind had transcended the experience of the subtlest state of thought and arrived at the source of the thought, the objective referent of the electroencephalograph, the same machine used by Banquet and Wallace to defend TM's uniqueness, demonstrated the complex, heterogeneous profile of different drowsy and sleep stages.

Other carefully designed experiments have also demonstrated the importance of sitting quietly and/or repeating a word. Once these factors have been controlled, the unique aspects of TM no longer appear. Michaels, Humber and McCann (1976), decided to empirically test the frequent claim of "stress" reduction following TM episodes. These experimenters measured several chemicals (plasma epinephrine, norepinephrine and lactate) known to reflect a systemic condition of "stress" in twelve TMers (nine of which were qualified TM teachers) and nine volunteers (controls) who were selected to approximate age and sex distribution of the experimental group. The control group was instructed to merely sit quietly with their eyes closed while the TMers meditated.

The results clearly indicated changes between pre- and post-test conditions. During the relaxation period or the TM period, reduction in stress indices were observed. However, there was no difference between the samples from the TM subjects and the control subjects. Huber and McCann concluded that the results indicated rest rather than TM *per se* was associated with the associated changes in blood chemistry. Since eight of the TM subjects reported having a good meditation, it is unlikely that any marked alteration in ordinary practice occurred. Again the psychological experiences associated with TM were not reflected in biochemical parameters.

The occurrence of alpha rhythms (eight to thirteen Hz oscillations or waves) and theta activity (high amplitude waves between four and seven Hz) in the EEGs of people engaged in TM has been implied as another unique and potent characteristic of this experience. TM "sell" posters, adorned with mountainous peaks of squiggly lines from spectral analyses, have placed great emphasis on the occurrence of these waves. The perceptual impact from these configurations is impressive and artistic; their occurrence in the laboratory is routine. Alpha rhythms and theta activity, at intensities typical of those associated with TM, are found during normal periods of drowsiness (Fenwick, Donaldson, Bushman, Gillis and Fenton, 1975) and hypnosis (Ulett, Akpınar and İtil, 1972). In fact, enhanced alpha activity is characteristic of all the major tranquilizers.

Theta activity or theta waves are also one of the most frequent components of brain abnormalities and are common correlates of abnormal behaviors. Enhanced theta activity is found in the temporal lobes of patients prone to certain types of epilepsy. Many of these theta-prone activities are associated with private experiences of dreaminess, unreality and the inability to differentiate dreamlike sequences from actual external events. Aggressive behaviors and a variety of sociopathic behaviors have been related to abnormal theta activity in frontal brain regions, although a one-to-one relationship appears to be unlikely.

Recent data demonstrate occurrence of transient theta activity during the "waking state" within the normal population in proportions never before suspected. Many of these bouts are associated with episodes of stress and consequently disappear as the person adjusts to the new lifestyle demands. Still other people displaying such electrical activities do not appear to behave in any unusual manner, per se, although it could be argued that occasional unusual behavior, even pathological responses, would probably be dismissed by the person's peer group as "just one of those things." With more massive theta displays in the cortices, complex human functions could be suppressed completely. This type of problem has concerned criminologists who have postulated that certain people may be prone to antisocial behaviors during periods when they cannot distinguish external from internal stimuli.

Since the EEG is a gross measure of brain electrical activity with limited numbers of differentiable increments and the behavioral patterns that compose different human personalities are almost unlimited, the problem of theta correlates is not a simple one. They can be associated with relaxation in some people but with clinical abnormality in others. TM appears to be only one of many stimuli that can elicit theta activity and appears to be a reliable technique, for some people at least, to hold the level of consciousness in a hypnogogic state. Whether this ability is therapeutic or even desirable for the population at large must be studied carefully. Are there some individuals who might lose control of TM trance induction with repeated practice? Is the TM technique any more efficient or productive than other types of relaxation training such as biofeedback? These questions must still be answered by scientists familiar with the problems of human experimentation but who are not in search of panacea.

The Mantra is an Artifact

The mantra, always allocated on a secretive and allegedly individualistic basis, has been argued to contain special qualities

to induce the meditational experience. A number of *ad hoc* explanations have been given to explain why the mantras—that are, after all, only one to three syllables—produce such unique effects. These explanations are based upon the assumption that any effects during meditation are a consequence of the mantra, and not due to simple sitting, relaxation and verbal repetition.

Studies that have controlled for merely sitting and repeating a word have demonstrated physiological, psychological and biochemical changes similar in both magnitude and pattern to those associated with TM claims. The most devastating evidence against the unique characteristic of TM mantras was presented by one of the initial experimenters: Herbert Benson. Unlike Wallace, who is a dedicated TMer, Benson pursued the problem of artifact. Benson's impressive historical analyses of mystical states demonstrated that verbal repetition was a key portion of the process. Consequently, he tested the hypothesis by instructing subjects to relax for a twenty-minute period and to repeat the number "one." As Benson aptly points out, the physiological and psychological changes obtained were almost identical to the alleged effects of repeating the TM mantra (Benson, 1975).

The positing of *a priori* explanations or assumptions about phenomena couched within situations prone to confounding variables is a perilous occupation. Although each generation of scientists solemnly swears to never commit the heresies of its predecessors, the disastrous consequences of adhering to arm chair speculation or to unapplicable theoretical conjectures are still foreboding possibilities. Dedicated belief in Newton's laws forced some researchers to find a "planet" between the sun and Mercury in order to explain this planet's odd orbital behavior. As telescopes became more sophisticated, but the mass requirements remained constant, the size of the "planet" shrunk to unrealistic proportions. Some men saw the "planet."

The dedicated belief in the TM mantra is little different. Assumptions have been made that the mantra must mediate the mystical effects, otherwise the effects could be reduced to

the consequences of simple sitting and relaxation—hardly an insight into the “cosmic nature of man.” To date, the explanations have been strained but still within the framework of possibility and empirical testing. It is possible that repetition of certain syllables or combinations might marginally influence body processes more than other sounds. However, the work of Benson and others indicate that the *main* effects are a consequence of relaxation and repetition of sounds.

As more and more data are collected and the likelihood of the mantra’s uniqueness becomes increasingly suspect, the TM believers will be forced to develop rationalizations and more complicated and farfetched reasons for the mantra powers. No doubt at one point where the data became overwhelming, the Maharishi may actually retract the contentions associated with the mantra and claim some other feature. He might claim that the mantra was only a first step to demonstrate to the masses the effectiveness of relaxation, but actually transcendence is the true goal of TM. If sufficient interest is continued in testing TM claims by members of the scientific community who have no personal commitment to the movement, the supposed special properties of mantra repetition could fall within the same classification as *abra-kadabra*.

The mantras, those magical chants guarded with utmost secrecy, are given by the Maharishi to his teachers. Apparently, they are not published. Instead, the teachers must sound them out, memorize them, and not forget them. They must never be given outloud and the young initiate must never divulge his mantra. The basic theory given by TM teachers is some form of “If other people know it and say it then the power is lost” type of argument.

Perhaps an alternative explanation for the mantra secrecy is the consequence of the exposure: people would realize that there are only a handful of mantras to supposedly fit everyone. G. J. Randoff in a sworn affidavit for the plaintiffs A. B. Malnak and E. K. Malnak versus the Maharishi Mahesh Yogi in the United States District Court of New Jersey civil action number 76-341, gives his list of the 16 mantras. The mantras are allocated to age, not personality problem.

They are:

eng	0 - 11 years
em	12 - 13 years
enga	14 - 15 years
ema	16 - 17 years
īeng	18 - 19 years
īem	20 - 21 years
īenga	22 - 23 years
īema	24 - 25 years
shirim	26 - 29 years
shiring	30 - 34 years
kirim	35 - 39 years
kiring	40 - 44 years
hirim	45 - 49 years
hiring	50 - 54 years
sham	55 - 59 years
shama	60 - years

No Comparators

Despite the statistical ritual and list of percentages about this improvement or that improvement following the TM treatment, the non-involved researcher often comments: "So what?" When human subjects, psychophysiological measurements and psychological tests are involved, comparisons must be made with other more well known variables in order to evaluate the absolute magnitude of alleged new effects. Without some comparator variable, the objective researcher does not know how powerful or how fragile the phenomenon can be. Statistical significance is not a necessary indicator of effect intensity, especially in the social sciences.

How many other variables than the TM operation can produce comparable if not greater changes in the responses measured? We do know that just closing the eyes can produce changes in the EEG comparable to TM. Compared to the EEG changes during sleep, TM-related alterations are trivial. We know that converting to a religion, taking a course in cosmetics, and falling

in "love" can produce changes in personality tests greater than TM claims. Compared to the effects of major tranquilizers, individual differences and simple maturation (just growing-up), TM influence on personality scores is irrelevant.

Is TM as potent to the anxiety prone as insulin is to the diabetic? Can TM quiet the epileptic brain in a manner comparable to Diazepam? Will prolonged TM stimulate the depressive patient as well as antidepressants? Considering the extent of TM research and low magnitude of the effects when exposed to more objective contexts, we must answer no to the above questions. In actual fact, TM effects are very weak when compared to everyday, important variables. Yet, isn't it odd that a phenomenon sufficient to induce "levitation" produces changes significant at only a piddling $p = .01$ level? Isn't it unusual that an effect that results in invisibility cannot influence the *major* medical and psychological problems of our time?

Solicited Testimonials

A major weakness of the questionnaire studies and most of the experimental (laboratory) studies is the reliance upon data resembling solicited testimonials. As J. C. Smith (1975) aptly pointed out: "A meditator asked to participate in a study investigating the beneficial effects of meditation might view this as a calling or opportunity to 'step forth for meditation' somewhat analogous to the evangelist's call to 'step forth for Jesus.' In both cases, we are left wondering about those who remained seated." Claims of TM effectiveness are often derived from about half the number of questionnaires released. What about those who did not return the questionnaire? Similarly in TM laboratory experiments, the subjects are volunteers and are not selected randomly.

The Fasces Method or Drown-'Em-With-Data-Approach

An initial look at the TM sell books produces a massive sensory overload of facts, experiments, charts and results, all

apparently supporting the philosophical claims of the Maharishi. Fantastic diagrams, statistical references and test after test appear to support the pervasive effect of TM. The contention that TM influences every aspect of a person's life is implied by the apparent TM effect on *every* test given (or at least reported) whether it be physiological, chemical, psychological or social. However, the alleged systematic approach supporting TM claims is an illusion that emerges from the sheer mass of measurements. With enough data points, one can see just about anything.

The TM experimental approach is a laboratory form of helter-skelter. TMers appear to have gone berserk with measurement, testing here and measuring there in a frequently thoughtless and random manner. They have tapped upon the social demands of twentieth century social science: publication, whereby great personal and professional pressure is placed upon scientists to develop long lists of technical publications. There are hundreds of psychological tests and thousands of combinations. During fads, like TM, the social facilitation in universities is so great that hundreds of social scientists, eager for another publication on their curriculum vitae, jump onto the TM bandwagon. Long after they have forgotten the passion of the research moment, their reports stand as massive "proof" of TM. Since there is an undisputed prejudice for significant differences to be accepted for publication in scientific journals, this lopsided reporting gives even greater support to the inflated claims of TM.

Methodologically, theoretically and experimentally, the TM experimental proofs are piecemeal. There is little internal consistency to them and what does occur reflects more the internal correlation between the tests used rather than the "pervasive continuity of TM." Many psychological tests—like those used to measure anxiety—are inter-correlated. Consequently, the demonstration of significant reductions in anxiety within TM practitioners by several tests is tantamount to the dozen blind men attempting to formulate the figure of an elephant by touching different parts of its body. Each blind man's report is complicated by the part of the elephant's body he is touching and by his own language-experience. Their

reports are inter-correlated merely because something is there and the reporters share language skills. However, there is no proof that what is there is actually what they say it is nor do their descriptions reveal anything about the origin, characteristics or behavior of the elephant. In fact, the same elephant, in another town might be called hypnosis or placebo or prayer or relaxation.

The lack of experimental direction in TM research is so persistent that an entire monograph could be written just on this topic alone. Here we must be brief. TM theorists have not explained how reduction in anxiety also produces the Maharishi effect (reduction of crime in cities where 1% of the population practices TM). By what mechanism is enhanced athletic skill related to a "relaxed brain wave condition?" What is the theoretical basis for an increased I.Q. following TM? Are we to assume this is related to the increased work production? How does one rationalize the reduced oxygen consumption with creativity?

To state that all these effects are due to some unique and unspecified relaxation or to some mystical, inferred force is useless within scientific formats. The assumption of some singular, underlying force that produces pervasive effects places TM into a long historical list of mono-homogeneous constituent theories like: mesmerism, spiritual force, vitalism and other ethereal, wish-fulfilling concepts. The use of such amorphous, homogeneous concepts allows one to answer every question posited, much like the neurotic adherence to god-answers. What creates man? God. What makes this or that happen? God. The TM concept of transcendent force is similar. It can be used to explain all the results. The absurdity of this type of rationale lays within the logical extension, for ultimately all questions end with the same answer. And the semantic trap is sprung.

No Direct Verification

Not a single experiment has verified the theoretical or philosophical poetry of the Maharishi. Some experiments like

those describing several stages of sleep during TM have been blatant rejections of the TM contentions. However, most experiments have proved nothing, except that some change took place under some very routine situations. Not a single experiment has measured a thought moving down to its subtler form. Not a single measurement in the mass of experiments has detected anything really unusual in the body during TM, a curious absence considering the latest TM claims of invisibility and dimension traveling. Not a single experiment has demonstrated the body using subtler aspects of the nervous system during TM. One only has to read the daily newspaper to realize that this decade has hardly been the initiation of the Age of Enlightenment.

The multitude of changes that have occurred in TM experimental and non-experimental situations are no doubt reliable—assuming cheating occurs in only a small portion of the cases. But these changes, the altered anxiety scores, the increased creativity, the decreased blood pressure, the increased athletic performance, and the decreased drug usage, are *not direct* tests of the basic TM theories and philosophy. These changes are only *inferred* consequences of the Maharishi's poetic descriptions.

The Maharishi's mistake is similar to the error committed by J. B. Rhine and his followers regarding alleged proofs of ESP. Rhine assumed that subjects who displayed guess frequencies above chance expectancy were using ESP. In short, he equated statistical significance with the presence of ESP, ignoring the multitude of other factors also capable of producing similar alterations in card guessing, such as procedural artifacts. The Maharishi's followers have concluded that all the changes measured are actually due to the reasons given by TM philosophy. There is no direct proof.

A popular counterargument is "How do you know it is not there?" Simply, we do not. But the question is a fruitless one since it can be raised for any non-empirical, indirect explanation of observable events. I could postulate with great detail that all of the effects produced by TM are due to invisible,

nonphysical, pink elephants urinating twice a day for twenty minutes. This may sound ridiculous, but "How do you know they are not there?"

The Biased Experimenter

During the early development of scientific methodology, tools of measurement were crude and insensitive. As a result, gross and obvious phenomena were the subject of the day. Objects fell at thirty-two ft/per/sec², oxygen plus hydrogen in the presence of a spark produced water and released energy, and the injection of massive dosages of strychnine produced death. The contributions of the experimenter's beliefs or prejudices concerning the outcome of these gross phenomena were minimal. Blatant cases of fraud, lying or occasional dementia were exposed quickly by the impassionate tool of replication. If other experimenters could not repeat the alleged effects, then the experimenter's design was questionable. If the same experimenter reported many such non-replicable events, then the experimenter was questionable.

However, as more subtle and complex variables were studied and instruments became more sophisticated, the absolute magnitude of various phenomena decreased. Many of these phenomena were so small in magnitude that a myriad of other variables could mask, enhance or interact with them. This problem became most pronounced in the areas of the behavioral sciences such as psychology, sociology and some of the medical sciences. As the larger and more obvious phenomena were discovered and classified and scientists began to pursue less intense changes, such as the effects of attitudes, marginal tissue growths, and borderline therapies, the role of the experimenter's beliefs became increasingly important.

In some experiments, the difference between statistical significance and non-significance (publication and no publication) can depend upon a single score. An experimenter who believes or assumes a particular hypothesis may accidentally "delete" the aberrant score and rationalize the action with a

Chapter 4

ALL TM EFFECTS CAN BE PRODUCED BY SUGGESTIBILITY/ PLACEBO CONDITIONS

TM believers and protagonists have emphasized repeatedly that TM is not just another form of hypnosis, autosuggestion or placebo (“sugar pill”). Wallace (1970) stated that there “. . . is no belief, faith or any type of autosuggestion involved in the practice of the technique.” Peter Russell (1976) is less pedantic and appeals to the personal proof of TM’s special property. In his book for TM skeptics: *The TM Technique*, Russell says that he “believes” there is a great difference between TM and vulgar suggestibility. He attempts to confuse the issue by evoking the old “you have to experience it” argument—a clear rejection of scientific objectivity—and by implying conspiracy: “It is interesting that such theories . . . (suggestibility) . . . about the mantra are generally put forward by non-meditators.”

The major thrust of TM arguments against the similarity of TM effects and suggestibility/placebo effects swings heavily upon: (1) faith statements and (2) an experiment allegedly comparing TM, hypnosis and sleep by Wallace and Benson published in the prestigious *Scientific American* (1972). When confronted with the TM-hypnosis argument, many TM teachers reflexively reject the option with heart-tugging but scientifically worthless statements such as “The Maharishi says it’s not” or “Everyone knows that hypnosis is associated with weird trances and things but TM is a form of relaxation and transcendence,” or “With hypnosis you need a hypnotist to give you instructions while in TM there is no hypnotist.” More advanced teachers

or TM members of the academic community familiar with "proof by experiment" (no matter how badly conducted) either reject the hypnosis problem as mysticism, deem it relevant to lower socioeconomic class people only (the "I've got a Ph.D. hence I'm immune to ordinary problems" argument), or evoke the tired old experiment by Wallace and Benson showing little oxygen consumption change with hypnosis (or sleep) and great changes with TM.

Close scrutiny of the almost emotional avoidance of a TM-suggestibility or placebo identity indicates the operation of two important factors. First, TMers and the lay public carry several erroneous assumptions about suggestibility/placebo effects, due primarily to movies and to the confusion between stage and science. Secondly, if one *objectively* evaluated the known physiological, biochemical, psychological and social effects that *can* be produced with suggestibility, then the entire structure of TM existence would be threatened. The relationship between TM and hypnotic phenomena are not superficial; they are deep and interwoven. No amount of pretty words, emotional appeals or soothing soliloquy will change their fundamental similarities.

There is little doubt that TM practice produces the small but significant reported changes in the human subjects tested. However, the same effects—almost to the level of significance—can be evoked by situations associated with hypnosis and placebo reactions. Some individuals, who share personality characteristics strikingly similar to long term TMers, can display heart rate changes, decreases in oxygen consumption, hypnogogic sensations, experiences of leaving the body and frank hallucinations. When completed, they feel relaxed and enthusiastic. Some can become psychologically dependent upon these behaviors.

Placebo effects and suggestibility effects are powerful phenomena. Although people who respond to placebo treatments and positive expectations are commonly considered "mental cases," hypochondriacs or "having the sickness in their heads," the placebo or suggestibility factor remains one of the

most effective means of treating many established illnesses, in other words, *normal* people. Placebo's commonly yield between 20 and 70 percent relief of symptoms in controlled tests (Byerly, 1976) and may account for the therapeutic effects claimed in many non-prescription drugs. For example, only one out of seven purported antidepressant drugs produced effects greater than those associated with the positive expectation of placebo treatments.

The remarkable range of placebo/suggestibility effects cannot be overemphasized. In one experiment, medical students were told that pink capsules were stimulants while blue capsules were sedatives; actually all capsules were pharmacologically inert. Clear psychological effects were reported by 50 percent of the subjects in the direction of the expectancy. Consumption of the pink capsules was associated with "stimulation" while the blue capsules were associated with feelings of sedation. Interestingly, the *physiological* effects such as changes in blood pressure, were even more widespread than the psychological reports, occurring in 65 percent of the students.

Misconceptions about Hypnosis as a Special State

The area of hypnosis/suggestibility is strewn with unverified assumptions, anecdotal accounts and confounding variables. These misconceptions have been nurtured by the popular press and the motion picture industry. Consequently, the average person assumes that hypnosis/suggestibility is a "special state" characterized by a trance. During the trance, hypnotic prone individuals display bizarre behaviors like analgesia, amnesia, age regression or hallucinations. The average person is encouraged to consider the hypnotist a powerful person. In the hypnotic state, the average person exhibits unrealistic capability.

Hypnosis is not a special state of consciousness but rather a pattern of behaviors displayed by individuals with particular reinforcement histories to particular stimuli. In principle, hypnotic-related behaviors are little different than other situation-specific responses such as those that occur in the

context of church in the presence of parents, or during funerals. The so-called "hypnotic trance" is not required for displays of hypnotic behavior. According to T. X. Barber (1972), highly susceptible subjects demonstrated conditions of amnesia, limb rigidity, hallucinatory reports and age regression to test instructions, without trance-like characteristics. During this period, the subjects responded normally and did not feel as if they were "hypnotized." However, if subjects were told to close their eyes and to go into a hypnotic trance, they displayed the expected characteristics of psychomotor retardation, passivity and lethargy. Barber found the display of trance-like conditions in susceptible subjects to be dependent upon two tangible antecedent conditions: (1) whether the situation was defined to the subjects as "hypnosis" and (2) whether or not they were asked to close their eyes.

Barber's results are powerful. In short, they demonstrate the potent contributions of the subject's expectancies and attitudes associated with diffuse, emotionally-loaded words upon human behavior in the laboratory. Merely the statement "You're about to be involved in an experiment concerning hypnosis" is sufficient to modify some people's behavior. To this situation, these people respond with what they have seen, read or heard concerning behavioral alterations during hypnosis. Since trance-like conditions compose the major association of hypnosis to twentieth century Western man, these behaviors are displayed. Not surprisingly, when hypnotism was associated with "surges and seizures" during the eighteenth century, a certain portion of the population displayed such behaviors when exposed to test instructions.

A second misconception about hypnosis involves the nature of the symptoms. Most laymen consider the types of responses displayed by suggestible people to be bizarre or unique to the "trance." However, most of the "hypnotic trance" behaviors are mundane and would occur without the hocus pocus. The average man can hold his body horizontally across two chairs, especially if the back of one chair is placed under his shoulders and the back of the other is placed under his lower leg. The

famous blister formation or "whealing" can be produced in a large part of the population, especially those with dermatological disorders, by just briskly running the fingernail across the subject's arm. Since the highly hypnotizable person displays an excellent memory (Spiegel, 1974), the so-called age regression experiment in which the person is told to regress to age six and remember the week day upon which the last birthday occurred becomes a simple arithmetic calculation. Other more impressive feats such as the decrease in blood flow in one arm or "telepathic information" frequently involve paid stooges or failure to challenge the hypnotist's claims. The audience accepts his contentions on faith.

Susceptible or highly responsive subjects display a myriad of other changes without the "hypnotic trance" symptoms. While engrossed in a book, the highly susceptible subject can display "immunity to pain," alterations in heart rate, changes in peripheral body temperature, and digestive juice accumulation. While reading a novel, these individuals report vivid experiences and feel as if they are immersed in the book, as if everything is removed except the scene in which the author has placed them. When given instructions about the tremendous positive benefits of a new drug, these individuals report alleviation and relief of colds, pains, headaches, and anxiety, even though the "drug" is pharmacologically inert.

A third major misconception about hypnosis/suggestibility involves the personality of individuals prone to the manipulation. These individuals are frequently considered weird, neurotic or somehow unbalanced, with either low intelligence or poor educational background. Although correlated, these factors are not always predictors of hypnotic suggestibility. As Spiegel's research with the grade five syndrome of highly hypnotizable people demonstrated, neither intelligence nor education is a necessary protection from responsiveness to test suggestions.

All of us respond in some manner to test suggestions or provocative stimuli. When food deprived, words like "juicy steak" can evoke not only clear, vivid, realistic images of food but also changes in gastric secretion, and salivation. (When

was the last time you experienced a mouth-watering sensation when thinking about a favorite food?) The average North American male displays sexual arousal, increases in heart rate and general activity when exposed to pictures of attractive nude women. Movie sequences in which the star is engaged in some particular social-superiority behavior such as "telling off the boss" or "outwitting the police" can evoke images of gratification in the viewer. During this time, the viewer may substitute himself for the actor.

Some individuals can demonstrate sexual excitement by merely listening to a few words. Some people can imagine a vivid morsel of favorite food in three dimensions setting on the desk; they may actually reach out for it. To precise verbal instructions, they can experience time distortions, display bouts of amnesia and report mystical experiences. Simple instructions such as "There is no future, only a past" or "There is no present, only a future and past" are sufficient to generate sensations of feeling dead, transcendence, unreality or relief from anxiety. Small changes in word patterns can evoke great alterations in the behavior. To test instructions, these individuals display alterations in physiological measures such as sweating, vasodilation (blushing) or alteration in muscle tone. Simple instructions to regress into the past or to progress into the future are sufficient to elicit childhood language or geriatric immobility.

Although these people may appear odd upon first inspection, they are normal and their symptoms are consequences of the human experience. The human being can be seen as a complex locus of response systems that include the skeletal framework, the visceral matrix, the cardiovascular reflexes, biochemical alterations and private (thought/consciousness) behaviors. All of these systems contribute to the total behavioral output of the human being and respond to a variety of internal and external stimuli. Each system has properties that define and typify it. For example, the skeletal system is characterized by background muscle tone and differential increments of contraction/extension. What we loosely call the awareness system is characterized by a variety of reports such as feelings of being a self or

entity, experiences that self controls its own behavior, and sensation-like events called thoughts.

If these systems do not operate for any particular time then the behaviors characteristic of these systems are not displayed. For example, when the skeletal system is not active, the whole body becomes flacid. When the cardiovascular system is not in working order, heart rate is altered or blood pressure changes. When the awareness system is not being displayed, there is no report of the person "being a self." Although the person is still alive, he appears to have no personality. Stimuli presented during these discontinuities would not be recorded within that system. Consequently, the person may later report gaps in his memory when the awareness system becomes active again. These events are quite common and normal. How many times have you had lapses in attention or gaps in memory while driving a car over a monotonous, routine route or while washing dishes?

Since these behavioral systems all occupy the same spatial locus—the human being—we would expect, statistically, interactions between them. Even though each system responds to its own characteristic stimuli (e.g., the skeletal system responds to force whereas the awareness system responds to symbols and words), learning allows interactions. For example, suppose the word "iema" is associated with simple relaxation and reduction in heart rate. The actual reduction in heart rate is associated with the relaxation, but since the word "iema" has been associated in time and space with the heart rate reduction, this word soon develops the capability to influence heart rate directly.

Probabilistically, one would expect certain individuals to have greater interactions between the awareness system and their autonomic nervous system. These individuals could display a decrease in heart rate, emotional experiences, and gut sensations such as the tart taste of a lemon, to the appropriate test instructions even though words are not the characteristic stimuli of these systems. By chance alone, there should be a significant portion of the human population whose association between words and internal changes are so strong that simple

sentences can alter many different systems. Since one aspect of the awareness system is the presumption that *all* the person's behavior is a consequence of free will or personal control, suggestions given by experimenters would be perceived by the subject as originating from within his/her own repertoire.

Personality Characteristics of Very Responsive People

The personality characteristics of highly suggestible, hypnotic-prone and placebo reacting people have been studied by both correlational and clinical analyses. Susceptibility to test instructions is not homogeneously distributed across all ages but predominates between the ages of six and fifteen (Hilgard, 1972). After a pronounced drop around sixteen to twenty years of age, there is a tendency for susceptibility to decline more gradually. The existence of hypnotic suggestibility within adults can be explained on the basis of *retained* childhood susceptibility. If childhood imaginative involvements fall into disuse or are replaced by a vigilant concern with reality orientation and objectivity, hypnotic ability fails.

According to Hilgard (1972), the capacity for imaginative and adventurous involvement (concentration), originating in early life must remain functional for hypnotic manipulations. Involvements that maintain this ability in college students are reading, drama, creativity, religion, sensory stimulation, and adventurousness. Apparently, only one area of involvement, such as maintained interest in novel reading, is all that is needed. Readings most conducive to the fantasy of participating in mental and physical activities (with appropriate emotion), involve novels, mysteries, adventure stories, biographies, and science fiction. Science books are least effective.

During these hypnotic-related involvements, these subjects display behaviors that would be called "trance-related" in situations where hypnosis is expected. They report experiences within which the immediate environment fades away and the sensations of the story characters become real. Intense and egocentric feelings of heat, cold, pain, and sexual arousal occur;

some may "hallucinate" or have "hypnotic dreams." Experiments conducted during these periods of involvement indicate the display of analgesia, alterations in muscle tone and a variety of physiological experiences in accordance with the involvement activity.

Not all concentration or involvement activities nurture hypnotic susceptibility according to Hilgard (1972). The high achievement and concentration associated with athletics do not contribute as much to this factor. Similarly, objectivity-emphasized and reality-oriented areas of the natural sciences also fail to foster this condition. Students majoring in the humanities and social sciences are more prone to show the responsive behaviors. However, any student who has maintained some form of involvement can display the proneness, especially those who have maintained a clear dichotomy between their public behavior associated with the ultra-objectivity (in an almost obsessive-compulsive manner) and their private behaviors associated with extreme subjectivism.

Other correlation studies with students have demonstrated relationships quite commensurate with Hilgard's analysis. People who score highly on hypnotic susceptibility scales also are more likely to report intense religious experiences, especially the sudden conversion and peak-experience type syndromes. During these periods, major reorganization of the person's life and personal relationships with "meaning" in the environment/universe are experienced. Not surprisingly, hypnotic suggestibility is related to positive placebo reaction. Placebo reactors display amelioration of headaches, anxiety, nervous tension, pain, and a variety of psychosomatic diseases following test instructions. These test instructions, usually administered by the physician, create a condition of positive relief expectancy to which the placebo reactor's physiology responds. Like hypnotically suggestible people, placebo reactors are more anxious, resentful and trusting than non-placebo reactors. In the past, extreme placebo reactors have also been called hysterical patients.

The personality characteristics of the highly hypnotizable

person have been studied by Spiegel (1974). He records the following behavioral patterns: (1) readiness to trust, (2) relative suspension of critical judgment, (3) an ease of affiliation with new experiences, (4) a telescoped sense of time, (5) an easy acceptance of logical incongruities, (6) an excellent memory, (7) a capacity for intense concentration, (8) an overall obstinance, (9) a rigid core of private belief, (10) role-confusion and (11) a subtle sense of inferiority. People with this behavioral pattern (the grade five personality) have been called somnambulists and deeply hypnotizable people in the classic literature. According to Spiegel, they comprise not more than 10 percent of the population.

The consequences of these symptoms have interesting implications for human behavior. Affiliation with new events allows the person to imitate environmental events privately. The person may feel nausea when a dog vomits or report hunger pangs and pain when viewing an emaciated child from a CARE commercial. This form of empathy when sufficiently intense can evoke the capacity for concentration, a time when the person reports intense dissociation. Afterwards, the person may report "returning to consciousness" or becoming "aware once again" and that during this period, there was no knowledge of what was happening. Overtly, however, the person may have engaged in precise, complex and creative behaviors. If explanatory phrases are available as fillers for these periods of dissociation, they may be evoked to explain—even in great details—what supposedly happened.

Treatment considerations for the highly hypnotizable person must appreciate the person's proclivity to affiliate with new premises without the critical scrutiny he/she would ordinarily apply when not in the state of high concentration. Because these people so urgently need direction, certainty and faith in something, grade fives are receptive to all kinds of social forces, even those that would be antagonistic to them in the long run. Social movements with great reliance upon metaphor-belief clusters where proof is dependent upon parable and emotional commitment, are powerful and possibly deleterious attractants.

As long as the metaphors can evoke highly emotive images and foster dissociative concentration, these individuals feel encouraged to remain.

Factors Influencing "Hypnotic" Responses

Experimental isolation of the factors influencing hypnotic suggestibility (or more appropriately, responsiveness to test instructions) has been pursued in a thorough and systematic manner by T. X. Barber (1972). Barber reported that the subjects' attitudes, motivations, expectancies, and ability to think with the suggestions contribute greatly to the "hypnotic condition." Tangible antecedent variables known to influence the subject's overt and subjective responsiveness to test suggestions are: (1) how the situation is defined to the subject (whether it is called a test for imagination or an experiment with hypnosis), (2) whether the test instructions are given in a firm or lackadaisical tone, (3) whether the subject is a volunteer or coerced, (4) whether the subject's behavior was observed by an audience or not and (5) whether the subject was provided with a clear conception of the experience that was desired.

Barber and his colleagues found significant correlations between the subject's expectation about his/her own ability to be hypnotized and the actual objective score on susceptibility scales. These results implied that manipulation of the expectancy might also manipulate "hypnotizability" or responsiveness to test instructions. In a preliminary study, one group of subjects were told that they were being tested for ability to imagine, while another group of subjects were told they were being tested for gullibility. All subjects were then assessed individually on the Barber Suggestibility Scale. While almost half the group tested for imagination manifested relatively high level suggestibility, only a small portion of the gullibility group remained responsive to test suggestions.

In another of Barber's experiments, the Suggestibility Scale was administered to subjects both before and after special instructions. After the initial administration of the scale, one

group of subjects was given task-oriented and motivationally arousing instructions, a second group was given no special instructions and a third group was administered negative instructions, implying that they were gullible. Whereas there were no differences in the three group scores on the suggestibility scale before the special instructions (3.6, 3.2 and 3.9, respectively), a marked alteration occurred afterwards. The positive instruction group averaged 4.2 (an increase in suggestibility), the neutral group averaged 2.1 (a slight decrease) and the gullible group averaged 0 (a complete loss of susceptibility).

If the subject has negative attitudes, motivations or expectancies toward the test situation, then he/she will not respond subjectively to the suggestions. He/she may consider the suggestions silly, stupid or infer that they cannot work. On the other hand, if the subject has positive attitudes, he/she may follow the suggestions and subvocally verbalize them. Such subvocal verbalizations and goal-directed fantasy evoked by the instructions facilitate the response. In subjects who showed the arm levitation response to the instruction, "Your arms are becoming lighter and lighter and are slowly rising," a direct relationship existed between the experience of volition and a goal-directed fantasy. Those who reported a goal-directed fantasy such as "I imagined a balloon tied to my arm and the balloon was slowly rising," reported an involuntary experience such as "My arm rose by itself." Those subjects who did not carry out such fantasies stated that they raised their own arms (voluntary movement).

Comparison of TM and Hypnotic/Placebo Effects

The areas of TM and hypnosis/placebo effects share very similar methodological problems, philosophical assumptions and degree of effect. Both TM and hypnosis have been troubled by an unsubstantiated assumption that they are special states of consciousness. This assumption was based more upon superficial behaviors during the time of meditation or hypnotic trance, than upon objective referents. Electroencephalographic

studies have demonstrated that neither TM nor hypnosis is a special state of consciousness. In fact, they are frequently indistinguishable from each other (Schacter, 1977).

Both areas are plagued by great individual differences; that is, some subjects seem to show the "effects" of the treatment, either TM or hypnosis/placebo, more effectively than others. Consequently, the differences in various physiological, psychological and biochemical measures between these treatments and control groups are frequently marginal or eliminated by variability. These results strongly imply that *the person rather than the treatment mediates the greatest part of the effect*. Certain people may respond to subtle differences in experimental protocol and exact wording. Depending upon how and from where the subjects are selected, the effects of TM and hypnosis can range from worthless to wonderful.

TM belongs to the same behavioral paradigm as hypnosis, suggestibility and placebo reactions. Increases in creativity, motor capacity, technical skills and memory (recall) have occurred following appropriate suggestions (Fromm and Shor, 1972). The changes in GSR, heart rate, respiration rate, blood pressure and muscle tension associated with hypnosis are the same in magnitude as those associated with TM. Typical diseases affected by placebo and TM instructions depend heavily upon the neurosis/anxiety component and include pain, menstrual cramps, headaches, arthritic complaints and hypertension. Like TM, the enthusiasm and personal conviction of the instructor (physician) can determine the placebo's efficacy.

Although one could compare TM and hypnosis effects across experiments, only direct comparison allows detailed evaluation. Such a critical experiment was completed by Walrath and Hamilton (1975) who compared directly the effects of TM, hypnosis and instructed relaxation upon heart rate, respiration and GSR. As their data clearly indicates, no marked differences existed between the procedures of instructional relaxation, TM or hypnosis. The same relative decreases in heart rate, GSR counts and respiration rate occurred in all three conditions.

Are TM Adherents Just Highly Suggestible?

The data and arguments presented thus far appear to place the major "effects" associated with the practice of TM upon the *people* involved. These people would be included in the grade five category of Spiegel or be called highly hypnotizable or suggestible in clinical psychology. According to this assumption, these same people would have shown similar changes in physiology, behavior and biochemistry in another metaphor-filled, philosophical social movement typified by a parental figure-head, peer group involvement, clear specification of primary goals, and world-wide conversion promises.

Banquet and Wallace's famous EEG studies demonstrating enhanced alpha rhythms and increased theta activity in TMers could reflect the type of person who remains in the movement rather than a special property of the treatment. In other words, susceptible subjects show these EEG profiles as a normal baseline. Galbraith, London, Leibovitz, Cooper and Hart (1970) found that the seven Hz component with the eyes closed and the five Hz, six Hz and eight Hz component with the eyes open, taken from the occipital lobe, were optimal predictors of hypnotic suggestibility in subjects. Such components are claimed frequently by TMers as unique to meditation.

Although at present we can only suspect the high proportion of hypnotically susceptible people in the TM ranks, one study clearly indicates the option deserves further study. In Walrath and Hamilton's (1975) study that involved direct comparison of relaxation techniques, hypnosis and TM, only 44 percent of the non-TM volunteers were rated highly susceptible while 100 percent of the TM practitioners received the high scores. They concluded that "either the practice of TM increases susceptibility to hypnosis or alternatively highly susceptible subjects find sufficient reinforcement in the technique to continue its practice for long periods of time."

The number of susceptible people in the North American population would be sufficient to nurture a multitude of TM-like social movements. If only one percent of the population displayed grade five personalities, the TM organization could

glean approximately three million people. If only 0.1% of the population (one out of every one thousand) displayed these behaviors, then the TM philosophy could potentially attract approximately 300,000 people. These people would be influenced by attractive posters, suave presentations, metaphorical language (such as the bubbles rising from the bottom of a lake) and the heavily emotionally loaded condition of the mantra meditation.

Walrath and Hamilton's alternative suggestion—that TM makes the individual more susceptible to hypnosis—is far more foreboding. It implies an active alteration of people's behavioral patterns when exposed to the TM technique. With the enhanced susceptibility, these individuals would be prone to the pressures and suggestions of the organization. With this assumption, they would respond to directives from the organization as if they were test instructions. Slowly, the autonomy of these individuals could be eroded. What they read, think and say could be more and more controlled by the group in charge of the suggestions.

TM Conditioning as Stages in Suggestibility

A brief comparison has been made between hypnosis/suggestibility/placebo phenomena and TM. Their similarities are seen as well in the stages of induction or conditioning. Operationally, the procedures required for optimal and successful modification of behavior by either of these phenomena can be described in four phases. Phase I involves the long-term cultural association with the label: meditation or hypnosis, while Phase II involves induction of positive expectancies. Phase III and IV would be characterized by specific instructions and labeling of the subject's private experiences and by post-session suggestions.

Phase I is a passive condition that the subject brings into the situation. As mentioned by Barber (1972), simply the word "hypnosis" is sufficient to evoke behaviors of lethargy, decreased spontaneity and trance-like displays in the subject who has been exposed to these associations. The most likely sources

of these associations are movies, books, and peer group stories, especially those in which a great deal of mysticism or mystery is involved. The heavy loading of the word "hypnosis" is evident since the same instructions prefaced with the statement "You are about to be involved with creative thinking" does not elicit these stereotyped behaviors.

Phase I in the TM schedule is also passive and dependent upon the potential convert's associations with the transcendental meditation or meditation in general. Traditional associations with meditation are altered states of consciousness, development of the real self, control of body functions, special occult-like powers, and most of all some form of death transcendence/escape (such as reincarnation). The more recent epidemic of quasi-Eastern literature and Lobsang Rampa-type approaches have paired parapsychological powers and the ancient wisdom hypothesis.

All of these associations are clustered with a loose but emotionally viable conceptual core. The existence of this core can be demonstrated by encouraging the person to discuss, in an informal manner, what he/she thinks about meditation. Within a sixty-minute period (the usual core time), an average person will proceed through meditation, Eastern philosophy, escape from death, parapsychological powers and whatever idiosyncratic concept is paired with them. Avid readers of the occult, mysteries and related involvement activities would have developed, a rich, vivid repertoire of images and experiences. This repertoire would be stimulated by the words "TM," pictures of a Maharishi, or some pictorial form of Eastern art.

Phase II is more situation dependent and requires local conditioning; there is less reliance upon cultural loading of the subject. In the hypnotic/suggestibility/placebo procedure, Phase II would be involved with acute induction of relief expectancy. This expectancy would be encouraged by the details of the immediate situation in which the person has been placed. It may be the attendance of a particular stage performance, waiting outside the doctor's office, or the interim between the statement "You are about to participate in an experiment

with hypnosis," and the following instructions. The temporal interval between Phase II and Phase III may not be immediate. For placebo effects, the acute expectancy may be induced by peer group claims of the wonderful efficacy of the drug or treatment in question.

Phase II in the TM situation is the free lectures that are clearly constructed to induce positive expectancies about the advantages of TM. These lectures are concentrated with attractants for almost every persuasion. For the science student, who does not believe in the bunk of personal experience, there are massive amounts of scientific data collected by scientists at prestigious universities and published in well-known journals. For the arts and humanities student, who finds meaning in mental masturbation, there are clusters of metaphors to stimulate the imagination. Some of these metaphors are long, elaborate and permeated with verbal entrapments. Meditation is pictured as golden grain on the other side of a hill and the average person is compared to the starving population who has not dared to venture over this small impedance. One only has to seek (and he/she will find) the other side and use the grain that will save the lives of millions. The "treasure" at the end of the rainbow fantasy, fostered since childhood, is resurrected once again.

Perhaps the major source of the expectancy is derived from the personal variables in the meeting. Through video tapes, testimonies of local converts and via self-expression, the teacher portrays an ideal sought by all those who pass the transitional anxiety of adolescence and young adulthood. The teacher is suave, answers all questions, and demonstrates a cool, confident feeling about his/her own abilities. To the drug user, the teacher may appear to be on some permanent high within which he/she experiences the "true self." The average anxiety-ridden student or working person infers that he/she too will be able to enjoy these characteristics, and the expectancy of relief is set.

In Phase III, specific test instructions are given. Subjects exposed to the hypnosis/suggestibility/placebo format are given a statement or demand of details that they will experience

following the presentation of some particular cue. In the case of verbal control (hypnosis, *per se*), the particular cue would be the last phrase, "You will now experience this or that," while in the placebo situation, the cue may occur sometime later, when the person actually consumes the placebo. The critical feature is not the time interval involved with Phase III, but rather the deposition of *specific* instructions/expectancies to the subject to be evoked in the presence of a particular cue.

In the TM situation, Phase III involves the administration of the mantra and the instructions of what to experience during the mantra repetition. The TM teacher—who also contributes to the re-stimulation of experiences of Phase II—tells the prospective student what to expect and to experience *when* repeating the mantra. In this manner, the mantra becomes a cue for the display of specific experiences. Whenever the cue is displayed (the mantra is repeated), the expectancies associated with it will be displayed. Examples of specific instructions by the TM teacher would be, "Let yourself flow with the meditation" and other colorful metaphors.

When the experiences acquired and associated with the cues instituted during Phase III are displayed later in other situations, Phase IV has been established. In the hypnotic situation, Phase IV would be equivalent to post-hypnotic suggestions whereby the person displays the behavior suggested in the presence of specific cues. For example, the suggestible person may be told to feel cold whenever the instructor says the word "turkey" during the following days. Phase IV equivalents in the placebo situations would occur whenever the person administers the sugar pill to herself/himself and feels relief. Certainly facilitation and maintenance of the experiences in Phase IV can be strengthened by occasional later suggestions of a similar nature, occasional visits to the physician and "pep" talks.

Repetition of the mantra and of the meditation position in the days following initiation comprise Phase IV of the TM induction. During this time, the suggestions given by the TM teacher are evoked whenever the mantra is repeated. Although one could argue that the repetition of the mantra in itself

produces a hypnotic experience, this factor is less important than the paired association between the mantra and the expectations of relief received from the teacher. The mantra is merely a means of maintaining those experiences; whenever it is displayed, the initiate experiences the equivalent of a post-hypnotic suggestion.

The use of the mantra has clear conditioning advantages over normal cue words involved with hypnosis/placebo situations. Typical English instructions involve words associated with several meanings that would confound and perhaps weaken the instructions paired with the induction situation. For example, the word "turkey" can be associated with a fowl, a stupid person or a country. The multitude of other meanings would compete with the associations of the test instructions. Since the cue word might occur by chance alone in the normal conversation—without reinforcement, and with no option to display the behaviors—the suggestions associated with it would be extinguished.

The mantra on the other hand are, for all practical purposes, nonsense words. When they are associated with the TM induction period (Phase III), there is little likelihood of competition from other sources of association. The elocution of the mantra would be paired with singular instructions of what to experience; there would be no competition from other associations. Since the mantra would not be encountered in everyday language, the experiences associated with them would not be extinguished easily.

However, the mantra power would follow the same laws of conditioning and learning as other symbols. Without occasional reinforcement, their associations would weaken. To prevent this extinction, the TM organization uses the check method through which one visits the local group within a few weeks after initial acquisition. This procedure will maintain the TM experience for several weeks to months by itself. However, for more long-term conditioning, the person must be reinforced (receive the instructions) in some other manner. Listening to tapes of the Maharishi, hobnobbing with the TM peer group and

cosmic discussions about the future of man, are means of maintaining this condition.

Chapter 5

THE TM SELL JOB

The TM organization has employed an extraordinary marketing campaign to sell its product. Both traditional and innovative techniques have been utilized to promote sales and enlist converts. The techniques of proof by numbers, affiliation, written word and television have been employed wisely. Serial shaping of behavior, much like the addictive tactics of book clubs and cosmetic firms, allows the student to progress from private concentration to group comradeship to offices among the high echelons of TMdom. The Maharishi, a superb manipulator of images, has appeared dressed in Christ-like robes and preaching peace and prosperity. Together, reinforced by scientific claims, these procedures have composed the TM sell job.

Proof by Numbers

The basic thesis of this approach is that large numbers of people cannot be wrong. Sales and service departments of major industries use this technique repeatedly, by reporting that 10 percent of the population use their product or so many millions of consumers buy their merchandise. The implicit theme relies upon the assumption that if enough people buy the product, then the prospective buyer will get his money's worth. Rip-off appears less likely.

The TM organization boasts over one million adherents although this figure appears to reflect the number of people initially paying the fees and not follow-up studies to indicate

how long they maintain the meditation. During the initial free lectures, TM teachers frequently refer to the vast and increasing numbers of people that are finding their "true self" and the experience of relaxation along the TM pathway. Some teachers end the lecture with phrases such as "Can millions of people be wrong?"

There is a catch to the proof-by-numbers assumption. When a person pays for a commodity and it does not work according to expectation, he may not always report the discrepancy. If enough people have presumably benefited from the commodity, then the person may allocate the blame towards his own limitations rather than to the product. The unsatisfied person is not likely to talk about the problem because of anticipation of social ridicule such as being teased for losing fifty dollars in an otherwise clear rip-off situation.

The catch is much like a childhood game. It starts by one young enterprising child writing "you have just been screwed out of a nickel," on a piece of paper and selling it for five cents to another child. Once the second child has bought the paper and realized the contents, he is more likely to sell it to another child than to admit he has been "suckered" by his own peer group. So, the piece of paper passes from hand to hand. If enough children become irritated over the loss of a nickel, then the rip-off may be made public. But for a nickel, who wants to bother?

Proof by Affiliation

Proof by affiliation does not depend upon a vast mass of numbers but instead reflects the society's concept of status. The TMers have evoked proofs by both institutional and personal affiliation. In the former situation, universities have been used for their association with knowledge, discovery and the common good. TM meetings are held within the buildings and classrooms of colleges and universities. Students and especially the lay public, who are not familiar with the procedures of academia assume automatically that university occupancy

implies validity. They do not realize that rooms are rented in many universities or are given free of charge for just about any meeting since universities are financed heavily by public funds. By this simple manipulation, the prestige of a university setting is added to TM claims.

The personal affiliation proof assumes public imitation of individuals with high social status by the average person. Such modeling is an adult form of parental imitation by the child and is related to the tendency for human beings to copy or replicate behaviors of people who allocate large numbers of rewards or punishments. During the last world war, for example, it was not unusual for prisoners to imitate the behaviors of the guards who controlled the major portion of rewards and punishments. Prisoners would be seen copying the inappropriate walk of the guard on duty, imitating his verbal expressions or reproducing his idiosyncratic gestures.

Imitative behaviors can be observed routinely in a crowd of people following attendance of a movie or stage performance in which a high social status star has displayed some specific behavior. One is often flabbergasted by the numbers of males who attempt to imitate male machismo figures after a mere two hours of visual exposure. One is frequently surprised to observe the numbers of females who attempt to imitate a sexy vixen or an indignant woman's libber. Psychologists are just beginning to understand the pervasive effects of such status figures upon the behavior of the suggestible or adolescent person.

On a more general level, proof by affiliation is another form of "keeping up with the Joneses." Physicians, movie stars, lawyers, and millionaires serve as constant impetus for many people to change their daily lives. Within their financial boundaries, and sometimes outside them, these people buy houses, cars, and bric-a-brac because "John Hughes has one and he's a millionaire." For individuals with such inextinguishable social aspiration, imitating the behavior of such high status people is a form of identification. By this imitation, they have some small thing in common with the person of their dreams.

The TM sell job uses movie stars, physicians, and scientists to sell their product. These individuals have appeared upon popular night-talk shows, viewed by millions of people, to give personal testimonials of TM success. In an endless chain of Hollywood glamour, the viewer has been exposed to how this star can now rest at night since taking TM or how that star can now work better each day since practicing TM. Occasionally, an emotional outburst by some dramatic and unstable star punctuates further the TM effect.

However, the viewer is misled. They are not told that personal testimony is not proof of effect. The testimony of a great star or personage concerning his own private behaviors is of no greater scientific value than the testimony of some less known person. The same limitation is applicable to scientists, especially the physical scientist or mathematician not familiar with psychological methodologies, who use their scientific credentials to portray the illusion that their verbal statements are scientific. No doubt, these individuals may be brilliant within their own fields of expertise, but outside this narrow band many of them are as naive about human behavior and psychological processes as the person on the street. Testimonials by these scientists or explanations about how TM works from a scientific point of view is of more commercial than experimental value. Unfortunately, many of these scientists further contribute either intentionally or within the fervor of moment to the sell job by bamboozling the audience with fancy scientific words and complicated jargon.

The viewers are also not told of the dangers within personal discovery. Popular talk shows frequently encourage new unfounded and controversial theories or discoveries to be aired to the public. The public does not realize that the scientists supporting the claims have a great deal of personal time and effort invested within the project. Often the public is misled by the scientific credentials associated with the presenter, not realizing that an unfounded theory or distorted finding from Harvard University is little different from a similar result from Carroll College. When the language gets "above the viewer,"

he/she is more likely to become interested in the talker's face or how he's dressed or if he looks sexy or not rather than the content of the conversation. Later the viewer remembers only that some good looking young dynamic man from Harvard said that TM cures anything and does not recall the statements such as "statistically significant" or "works in some cases."

The Einstein Sanction

Hardly any book concerned with borderline and far-fetched concepts fails to mention the name Albert Einstein. If one accepted the claims of borderline theorists at face value, Einstein was a latent astrologer, parapsychologist, Christian, atheist, extraterrestrial being and general believer in the wonderful. Writer after weirdo has used his name in vain to legitimize theories, conceptions and speculations. With the appearance of the name Einstein or the phrase "Einstein said this. . .," even the most ludicrous and absurd possibility achieves a glimmer of respectability.

The obsession with Einstein in recent years is not related to his actual contribution to Western science since outside the reflexively-elicited $E = mc^2$ and some elementary velocity-dependent equations, few people are competent to understand the intricacies and limitations of his mathematical models. Einstein has become a symbol to the popular conceptual core that includes other dimensions, bizarre interactions of space-time, weird forces and most of all, totally unfathomable, incomprehensible mechanics. Add the well publicized persecution of Einstein by his peer group and his unbelievably naive philosophies, and a symbol is presented with which any ridiculed far-fetched pseudoscientist can identify.

The Einstein symbol is perfect for philosophies canting far-out metaphors. Although the actual mathematics and mechanics of relativity and nuclear forces are complex and detailed, the translation into everyday language is by necessity simple and picturesque. In the process of translation, the rigor and testability of the model are lost and only clever and pretty

words remain. Consequently, the higher dimensions of a spiritualist become identical to the higher dimensions of relativity. Magical and non-specific ethereal forces become indistinguishable from photons and quanta.

An expected effect of the Einstein symbol is the glorification, indeed deification of what the old man said. Occasional, unintentional and polite conversations of Einstein are interpreted as sanctions for pursual of the unscientific and the sublime. A preface written for a friend's book on mental telepathy is misinterpreted as a sanction for parapsychology. A frustrated phrase by a man in deep depression about his belief that "God does not play dice with the universe" is construed as the statement of a profound deist. The difference between the theorist—who contributed to Western science, and the man—who had friends and commitments and ordinary fears of death, is ignored.

The TMers have adhered parasitically to the Einstein symbol. They have boasted how he used cosmic consciousness and the science of creative intelligence to achieve his discoveries, but to our knowledge he was never given a mantra. Nebulous consequences of SCI are related in an unclear manner to relativity theory. They imply that Einstein turned his search towards the absolute by applying the principle of "knowledge structured in consciousness." The listener is left dizzy with images of moving through infinite space at TM speeds.

Proof by Television

The guardians of proof and truth have changed this century. Fifty years ago, people relied totally upon the written word as the source of reference and reality. The mere appearance of some statement in a nice type-set package of pages was sufficient to settle almost any argument. In the days when books were the sacred sources of knowledge and the printed page was the proof of all things, a common phrase was "well it's written in a book." Today's masses depend heavily upon the two-edged media: television. Television is used not only to entertain but to inform and to educate.

The educational component of television shows has been a persistent point of contention by psychologists on the one hand and commercial exploiters on the other. Contents considered "educational" appear to have a wide and ambiguous definition. Talk shows and many so-called specials or documentaries (dramataries) purport to be educational in nature. A well organized talk show may have, as guests, an entertainer, a politician, and then someone to add the "educational" part of the show. To the disappointment of many professional people, the educational part is a conglomeration of sensational, unfounded and bizarre reports.

However, the mere occurrence of a new theory or fantasy upon a widely watched talk show is sufficient to enhance the credibility. If catchy phrases are used such as "fascists are fags" or "Nixon's a nut," the theory can quickly become a household word. Such theories or concepts contribute to the pool of fads that wax and wane within the consumer population. In the past twenty years, the television public has been inundated with theories on how to lose weight, how to stop cancer, how to stop smoking and most of all, how to enjoy sex without really trying. By the simple presentation of these theories on prime time television, their position appears to change from tenuous and unfounded heresay to clear and established "fact."

The TM organization has used the television media both directly and by association to facilitate its success. TM proponents, from the Maharishi himself to adherents who have written pro-TM books, have appeared on local and national stations. Timing of their appearances is invariably associated with the release of new findings that will startle the world or with a local wave of TM conversion. Indirect use of the T.V. association is seen with the video-tape techniques used during introductory or "stimulator" lectures. Here the connotations of respectability and reference from visual stimuli emitted from a small T.V. screen are used to facilitate interest in the TM product. After all, can impressive-looking data, in color, presented by a scholarly looking person on T.V. (even if it's video-tape) be that unreliable?

There are several advantages to T.V. presentation of the data, idea or product to be sold. T.V. formats allow a continuous flow of information without the distracting and interfering effects of the audience. Good quality or reliability is associated with a product given a smooth presentation with a minimum of hums and hahs but with no high-pressure techniques. This effect can be easily accomplished on the T.V. by editing, re-taping and overlapping. The magic of the media is certainly no understatement; otherwise boring, humdrum people can be presented as vibrant knowledgeable experts.

T.V. profiles utilize non-verbal cues to stimulate and entrance the viewer. Whereas stage performance and general lecture formats do not allow close-ups of emotionally manipulative facial cues, television coverage allows magnification of eye contact, smiles and facial contours. These cues are paired with close contact or intimate distance from the speaker (such as situations where the viewer would be talking to a friend) and thus trigger the association with comfort, friendliness and assurance.

During the T.V. presentation, the TM teacher or presenter is little more than an overseer who is present to start and stop the tape. Consequently, any direct questions or criticisms by the audience may not be handled by the teacher. The teacher can allude to the tape as the source of proof or refer the antagonistic member of the audience to further information in TM books. Although the question raised by the viewer may be quite germane to the situation, the referral approach decreases the potency of the question. The other members of the audience do not challenge the teacher's tactics but instead accept them without question in a manner similar to the lack of challenge in a hypnosis demonstration. The statement by the teacher, "I am only here to help you understand, I'm not a specialist in the details of proving TM. I just know it worked for me," allows him/her to escape the critical and potentially devastating consequence of being put on the spot. If done correctly, the entire episode does not appear as an elusive tactic, but rather a professional means of handling a difficult question.

One must not forget the great status associated with T.V. presentations and those people who regularly appear on this media. A most interesting consequence of this effect seen in every town containing its own local station. Individuals who appear daily on the station, although they may have been selected initially from the grand pool of "nobodies," achieve significant social status. Newscasters, weathercasters and sports people who appear night after night find themselves enjoying the consequences of the daily pairing with the television. Even their mundane and inaccurate comments, hereto unrecognized or dismissed as drivel, now achieve social significance.

Proof by Lack of Disproof

One of the most common ploys of pseudo-scientific claims like those of biorhythms (the twenty-three-day, twenty-eight-day and thirty-three-day concept of accident susceptibility), astrology, pyramidology and fictional science writers like Von Daniken (*Chariot of the Gods*) and Berlitz (*The Bermuda Triangle*) is to support their contentions by lack of challenge. Typically, they will say that their theory must be correct because no one else has found counterdata. Since there has been no challenge, the viewer is coerced into concluding that what they are saying is correct. After all, if it really was a pile of junk, would other scientists let this person get away with it?

The viability of this technique is dependent upon the inherent dynamics of science in general. For one thing, most scientists do not become involved with popular, emotional and faith-associated topics since no amount of data appears to alter a believer's concepts. The careful design of experiments, money expenditure and time invested is not worth the outcome. Some claims are so far-fetched, such as the biorhythm concepts, or so blatantly full of artifacts and confounding variables, that most scientists consider even a peripheral pursual as bordering upon gullibility or breakdown in scientific rigor.

Secondly, science takes time. The proof of any phenomenon as a realistic, valid and reliable event may take years to demon-

strate. When unfounded theories are presented as if they are supported, the actual time required to affirm or disclaim them by other scientists usually outlasts the fad time of the theory. By the time the negative data have been found the initial arousal jag produced by the new theory has subsided; people just don't seem to care anymore. Since verification experiments require precise definitions, complicated procedures and problems unique to the laboratory shop talk, the negative data, when they are reported finally, appear cumbersome, confusing and perhaps contrived. "A simple illusion is preferable to a complex truth."

The TM organization uses "lack of disproof" in all aspects of the sell campaign. On television, in local meetings and at special lectures, the most redundant phrase used by TM protagonists is "There has not been a single experiment demonstrating any harmful effects of TM." However, the listener is not told that: (1) the term "harmful effect" has a large range in definition and (2) the demonstration of any harmful or uneventful consequences could take years to detect. The viewer does not know that an average latency between the initial barrage of new claims and the response by the scientific community as a whole—those who are not psychologically committed to TM premises—is about two to four years. Well designed and conclusive experiments take time.

Ignorant of these intrinsic properties of scientific research, the viewer and listener of TM data can become caught in the persuasive interim of the presentation. This enthusiasm is easily encouraged by intermittent reference to the absence of negative data and the apparent failure of antagonists to find anything wrong with the technique. The reader is not told that such experiments have not been conducted.

Recently, a modification of the proof by lack of disproof argument has been institutionalized into the TM sell job. About three to five years have passed since the initial enthusiasm produced by the Wallace and Benson experiments peaked, sufficient time to allow independent replication by other experimenters. Not surprisingly, several negative experiments have been reported, demonstrating that TM is little more than a

form of relaxation—hardly worth most of the hullabaloo.

However, the years of amassing pro-TM experiments by TMers has not been in vain, since the proof by numbers of experiments is still possible. When the occasional member of the novice audience does raise the question about this or that negative experiment, the TM teacher merely induces the old balance image. The hundreds of pro-experiments on TM effects are raised to refute the singular or small number of counter-experiments. After all, if there are 100 pro-experiments to every 1 negative experiment, isn't this the way science works? The listener is not advised that 100 experiments conducted by believers is little better than 100 testimonials.

TM Teachers: Portrait of Pseudotherapists

The quasi-therapeutic nature of a TM teacher's approach to introductory TM matter and to the shaping of the convert is a major attractant. TM teachers project easy, relaxed and knowledgeable qualities to the prospective student. Since TM presumably "involves deep psychological processes" and problems involving the discovery of the self—a problem that all of us contemplate at least once in a lifetime—the TM teacher is given credibility by association. To the student who is still attempting to determine how he or she is different from other people in the social environment, the TM teacher often appears in a clinical-like profile.

As mentioned, the major impact of the sell job at a local level—where the converts are made in largest numbers—lies within the characteristic of the teacher. It is imperative that the TM teacher display an aura of ability to solve personal problems as well as the capacity to delve into deeper meanings of life. If the TM teacher is not seen as a protector against possible aversive effects and as a guide for finding the true self, then the young student may not be confident to proceed.

The clinical image is reinforced by the apparent complexity and secrecy associated with the allocation of each person's mantra. A basic TM premise demands that each person receives

his or her own mantra, after the teacher has engaged in some apparently complex ritual. Presumably the mantra is tailored to accommodate each person's problems and should never be revealed (otherwise many people would discover they have the same mantra). This false diagnostic procedure is reminiscent of the true clinical or psychological inventory whereby following tests and questions, appropriate suggestions are given to the patient.

However, there is a fundamental and critical difference between the allocation of mantras and orthodox psychological evaluation. Mantra allocation is completed after only a *few minutes* following the initial meeting between the student and the TM teacher. Valid and professional diagnostics by psychologists require hours or even days and are typified by tens of tests, questionnaires and queries into the person's unique past. The TM teacher's apparent clinical prowess is a sham and is more like consulting a horoscope than diagnosing personality profiles.

TM believers vehemently insist that TM teachers do not pretend to be clinicians not do they give advice. Unfortunately, like the contention that TM is not a religion, their words do not match their deeds. The entire TM philosophy drips with psychological advice and suggestions. The philosophy counsels the person to adjust to society, to anxiety and to maturation. Directly and by association, the active practice of TM requires psychological modifications and attempts to solve other people's problems. Every time a TM teacher suggests TM as a means of coping with psychological problems, he is giving psychological advice.

Within this activity, an interesting contradiction exists. If TM is as powerful and as psychologically complex as TMers believe and insist, is it wise to give the technique to adolescent enthusiasts with only a few weeks of technical training? Inappropriate advice to many people can worsen their problems, even bring about personality deterioration or an unhealthy dependence upon the advisor. The amateur, playing with another person's personality, is apt to produce changes that he

may not be able to control. When eight or more years of graduate and postgraduate university training are required to just begin the understanding of deep personality changes (the kind TMers talk about), is it really safe to allow amateurs with an over-simplified philosophy to tinker with a complex and variable human being?

The Maharishi: Manipulator of Images

Certainly a chapter on TM sell techniques could not be concluded without mentioning the Maharishi's tactics of persuasion. The Maharishi has aptly used the psychological process of stimulus generalization. By this technique, responses or thoughts associated with one stimulus are evoked to another *similar* stimulus that has never been paired directly with those thoughts. For example, if you displayed fear-responses in the presence of your father, you may show similar uneasy experiences in the presence of a person with similar facial cues or similar behavioral patterns, even years later. When the effects of stimulus generalization do occur, the person is likely to report *deja-vu*-like experiences, a sense of "meaningfulness" or a vague feeling of recognition because of the implicit chains associated with the original stimulus.

Stimulus generalization allows the propagator of an idea to take advantage of considerable emotional arousal in the viewer as well as the correlated decreases in discrimination. The Maharishi, for example, dresses in a long white robe, displays long hair and a beard and chants the various types of humanitarian platitudes remarkably similar to the twentieth century conception of Jesus Christ. Other Christ-like associations are fostered further by the futurist philosophy, the proposed integration of TM into existing structures (like Christianity integrated into the Roman Empire), and the use of World Plans with implied utopias. Even the starry-eyed look of students sitting near the Maharishi are not unlike the glowing faces of newly converted Christians depicted in Hollywood movies.

Although the Maharishi insists that the movement is not

religious in nature he clearly takes advantage of the subtle conditioning responsible for the Western audiences' belief about a central religious figure. Through the centuries, stories, artists' conceptions and various forms of art have shaped Western civilization's concept of how "the savior" is expected to appear and behave. Since the promise of immortality and positive religious experiences are implicit in Christ-related verbal responses (as reported in biblical statements), the pictorial, behavioral depictions of Christ (even though they may be artificial) acquire reinforcing value by association.

When the Maharishi appears and attempts to sell his product (TM), he is not tapping just upon the person's interest, nor only upon the apparent scientific basis of the TM experience. He is also manipulating the North American audience's early and often unaware conceptions about Christ images. By such pairings, the audience's beliefs, indiscriminate trust and projected parental dependence associated with Christ-images may be generalized to the Maharishi and to what he says. One wonders what would have happened to the TM movement if the Maharishi had appeared dressed in a business suit, sporting short hair.

Chapter 6

THE TM WORD GAMES

The human being is a verbal animal. It communicates behaviorally, biologically and biochemically through a series of relatively effortless, low energetic releases of air from the pharynx and larynx. However, these stimuli (words) are by no means ineffective. Some sequences of words can induce experiences of vast mental expansion while others induce despair. Single sentences can alter heart rate to levels that would require significant drug use while others can produce behavioral changes lasting a life time. Some words, just four simple letters, can induce near-fainting, depending upon the situation. Considering the potent effects of words upon human buying behavior, an analysis of the TM sell job would not be complete without investigating the inescapable seduction of semantics.

Violation of Discourse Levels

When scientists discuss an area of research, they first establish the level of discourse, that is the models, paradigms and measurements used to study a phenomenon. In general, the different levels of discourse involve atomic, molecular, biological, behavioral, social and philosophical (or religious) phenomena. Each level contains its own labels, definitions and procedures for internal verification. Two scientists discussing the same phenomenon, such as electromagnetism, may not understand each other if one discusses the behavioral effects while the other argues the atomic effects. The languages are too different and the problems are too dissimilar; there may be no translations.

Generally speaking, the greater the distance between levels of discourse, the greater the number of incongruities and lack of mutual prediction. Whereas some molecular phenomena are predictable from atomic models, few human behaviors, if any, are predictable from just knowing the activity of atoms; the problems, measurements and concepts are too different for translation. Attempts at reconciliation between distal levels, such as application of quantal theories to human social behavior, have met with little success.

The TMers continually violate the level of discourse principles by attempting to describe (and sometimes reduce) social and psychological phenomena to atomic and quantal phenomena. Since the models, methods and measurements are so different between these types of phenomena, translation and interconnection ultimately take the form of descriptive tactics rather than quantitative comparisons. TMers further complicate the problem by adding an unestablished and ambiguous philosophy: TM, to help "close the gap" between the various levels of discourse.

One who shares this mentality is Lawrence Domash, a theoretical physicist and general believer in the TM technique. (He is also vice chancellor of Maharishi European Research University.) Domash has proposed a quantal model of human consciousness to explain the physiological and subjective data of TM. The attempt to jump from sub-atomic levels to complex human behaviors is an admirable goal. Unfortunately, Domash fails to specify that the term "human consciousness" is even more ambiguous than quantal mechanics. Although the term consciousness may have popular face value, the quantitative referents of this phenomenon, in the laboratory, are still a matter of controversy.

The term "consciousness" is a general word used in everyday language, not scientific language. It is used by people to convey a wide variety of subjective conditions, such as being aware or awake or involved in the situation. The term is so diffuse that specific measurements become as ludicrous as attempting to measure "here, there and everywhere." To attempt quantal

reduction of terms like "consciousness" implies not only a naïveté about the measurement problems of human behavior but a general failure to discriminate between different scientific and non-scientific languages. This attempt is little different than trying to find the atomic or quantal basis of religion, philosophy or tom-foolery; the absurdness is evident when one considers the logical extrapolation.

Nonetheless, Domash, with the protective and sanctified armor of higher mathematics, forges ahead. His main thesis is that the TM technique can induce coherence between neurons over long distances within the brain. The consequent quieting of the nervous system, in Domash's opinion, is analogous to the third law of thermodynamics, a state of lowest excitation and zero entropy (no disorder in the system) and is shown electroencephalographically as brain wave coherence (enhanced alpha and theta activity).

The entire theory lies heavily upon metaphors and qualitative comparisons, a procedure that allows just about all sets of general phenomena to be associated in a superficial manner. Old Eastern philosophical tricks like microcosm projected to macrocosm are seen in the analogies between superconductivity in macromolecules and cosmic consciousness in the person as a whole. Domash concludes the major portion of his presentation with a parallel between the vacuum state of relativistic quantum fields (a theory in a theory) and pure consciousness as viewed by ancient Vedic philosophy.

Analogies between known phenomena and new or unestablished possibilities can be useful for scientists as long as the probationary nature of the comparisons is maintained. Such mental manipulations can allow the discovery of details required for clear understanding of questionable phenomena. Comparisons of human memory to the domains of ferromagnetic materials and hysteresis loops can be beneficial to determine not only the limitations of the model but also to evaluate extrapolations derived from the more quantifiably tractable theory (magnetism) applied to the more vague phenomenon (memory). Any relationship between these two phenomena must be considered

correlational, otherwise the ultimate conclusion is that human memory *is* ferromagnetic crystal domains. From this logic, we could conclude that an apple *is* an orange because they share characteristics of seeds, a core, and a skin.

Domash's comparison of human consciousness to a vacuum state of zero entropy is tenuous in the least, and extremely dangerous logic at most. This parallel implies that the complexities of human behavior and the intricate configurations of the human brain emerge from a void, a situation of complete undifferentiation. It suggests a direct causation between an absolute void and the rich order of memories stored within brain space. It neglects the complex interactions between the environment and genetic predispositions. The theory demands that complexity arises from homogeneity.

Reduction of complex phenomena such as human behavior and biological activity to singular homogeneous causes is not unique to TM. Such reduction appears to be a frequent consequence of semantic pursual of the question, "What is the most basic unit of matter or energy?" In search of this answer, men have reported the existence of odyl forces, psychic forces, mana forces and a variety of other universal "it's-everywhere-its-everywhere" assumptions. Some philosophers have called this never measurable substance "god."

Although an apparent insight, the discoveries are meaningless. They elicit the complex contradiction: "How can something that is presumably everywhere with no structure or characteristic, produce the complexity of events that are structured and specific?" Cosmic consciousness, for example, has no measurable characteristics; they are always inferred from observation. Cosmic consciousness is quite different from atomic or quantal energy theories of matter since each of these contentions describes discrete, specific and characteristic aspects of the basic units. By knowing or assuming such units, the complexities of observable events can be presumed or ascertained by the patterns of these units. Cosmic consciousness is a diffuse word defined by vague phrases and given social meaning through artifacts of our language.

The questionable results of a metaphorical misapplication of quantal theory to consciousness occurs when the low entropy

principle is applied to sociological events. Orme-Johnson, another TM scientist, has given a “theoretical” rationale for the Maharishi effect. According to his assumption, the decrease in crime rate in a city in which only one percent of the population practices TM is due to the element of orderliness in the chaotic disorder of the city. Such order is allegedly similar to the principle of coherent wave forms in physics.

If the indiscriminate application of metaphors across levels of discourse, from quantal to behavioral, is so precarious, then why do they seem so tempting, so appealing, indeed, so correct? The answer lies within the nature of words. When the scientist attempts to communicate with non-scientists or individuals outside his area of specialization, he invariably reverts to common language. By converting to his language, the complications of mathematics must be reduced to simple sentences, the myriad of neurophysiological data points must be translated into simple words and the rich orderly fabric of human behavior must be reduced to a few phrases. Because there are only so many ways to combine words and phrases, phenomena are grouped together within the same verbal label even though they have little in common technically. The apparent similarity is an illusion that exists within the nature of everyday language.

Domash does not evade the trap. Since the everyday translation of a vacuum is a condition of silence and no change, and the apparent experience of cosmic consciousness is “perfect silence beyond change,” he implies identity. To Domash, the superficial translation of fluid metaphors in modern physics appears the same as the fluid flowing condition associated with psychological enlightenment. However, if you had only two ways—yes and no—to answer all questions in the universe, would you conclude from this limited description that everything answered with the word yes was identical in source? Similar plus similar does not always equal the same.

Simplicity as Profound Understanding

The translation of complex phenomena, such as dreaming, memory, sleep or learning into everyday language requires a

simultaneous loss in quantitative prediction. In order to understand the phenomenon of dreaming, the neuroscientist must be familiar with the hundreds of brain parts and their connections. To the neuroscientist, dreaming is associated with the locus coeruleus in the mesencephalon (or metencephalon, depending upon species) from which norepinephrine containing neurons send their non-myelinated axons to the hippocampus, cerebral cortices and ventral hypothalamus. By knowing the usual behaviors, electrical changes and chemical modifications associated with each of these structures, the neuroscientist can predict quantitatively not only the characteristics of dreaming but when and how it is most likely to occur.

The non-neuroscientist is not expected to understand the peripheral schematics of dreaming. Consequently, it must be translated into everyday language. Terms like locus coeruleus, norepinephrine and phasic discharge are foreign to popular language. There is no equivalent, no direct translation. Instead, all of these different, precise and unique brain properties must be lumped indiscriminately into one word: brain. The ultimate conclusion results: dreaming is due to changes in the brain.

Although this reduction displays the illusion of understanding, it is trivial. To say that dreaming is due to changes in the brain is a redundancy, since the two words have been grouped within the same association category in our language anyway. Dreaming is included as a subset within the greater set of the word "brain." Without realizing this connection, the person may be duped into concluding that he has indeed answered the question: "What is the source of dreaming?" All he has done, however, is re-label the phenomena with another similar word. However, this word does not elucidate the precise physical mechanism nor does it allow even qualitative predictions.

Such translations of complex phenomena into everyday language maintain the illusion of predictability and profound understanding. There are only so many words in our daily, non-scientific vocabularies—just a few hundred in fact—and, there are only so many gross, general equivalents between very specific and different technical phenomena and these words.

If one depends only upon popular language for the understanding of these technical phenomena, then a person may conclude erroneously that he/she "knows it all." A logical extension of this conclusion, that we have seen so many disappointing times, is, for example, "If schizophrenia is due to problems in the brain, why do those lazy scientists waste all our money on ivory tower research? Why not do something with the brain—it's that easy isn't it? Look here it says so in the newspaper."

By nature of our language, which is a scaling or measurement system, there are diametric opposites in all qualitative measurements. Such diametric opposites are most evident in value judgment scales such as bad versus good or up versus down or right versus wrong. Such essential pairs can be seen superficially in all disciplines of science where they are typically found in the parity principles: the pairing of opposites. There are positive and negative charges, matter and anti-matter, centrifugal and centripetal forces, agonist and antagonist, sympathetic and parasympathetic nervous systems, left and right wing politics, and at more philosophical levels: thesis and antithesis.

Since this concept is so diffuse, it can be applied to any phenomenon described by words. Early communist theorists used this technique, by applying the principle of dialectic materialism. According to this principle, there are three basic components to historical change: a thesis (or given condition), an antithesis, whereby the change swings in the other direction, and finally a combination of the two: a synthesis.

Because of the general nature of the concept, the predictions appear powerful, but they are trivial. One would predict that every human movement in history was connected to a condition, an anticondition and then a combination of the two. Since human history is recorded in words and not in numbers, that could fit with an infinite number of different equations, these apparently consistent conditions can be seen. Prediction of human behavior is also possible but trivial. No doubt, there will be anti-movements to movements followed by synthesis as long as man displays behavior. However, these predictions

are like saying that sometime, somewhere in the world, a plane will crash. There is no prediction or precognition in this statement since it is an ultimate consequence of conditions now in operation.

The fundamental operations of the Maharishi's approach depend upon word plays and not upon numbers, observations or quantitative relationships. With the use of gross metaphors such as "Everything is reducible to some general diffuse force" (cosmic consciousness), he can interpret and incorporate just about every aspect of modern science, but only after it has been translated into everyday language. The concept of "some things change and other things don't change" is so general that anything fits.

Through the reduction to simplicity operation, the Maharishi can teach all of the basic sciences in a six weeks' course. He can indeed boast that an integration of the many complexities of modern science are reducible to a few basic principles. Indeed, this is correct. They can be reduced to a few basic principles reflective of the essential operations of everyday language. But one must weigh the consequences. Is it worth the cost to sacrifice the details and quantitative predictions of technical science for a few super-charged, emotionally loaded metaphors about the nature of all knowledge? The illusion of superficial knowledge can be strong.

The Use of Vague Terms

Vague terms such as "Brahman Being" and "Cosmic Consciousness" can be neither accepted nor rejected directly. They are too diffuse and subject to idiosyncratic interpretation. However, their impact upon the human being is not cancelled. Rejection requires specific piece by piece negation of the multitude of different aspects of these terms. Since these terms are so inclusive, different aspects can require years to consider. In the meantime, only a single referent to some emotionally arousing aspect of the term is sufficient to maintain the conditioning of feeling and meaning.

The scientist is at a disadvantage with such terms since he/she must proceed with care, testing each case after each case against independent and repeatable references. The philosopher, con-man and semantic seducer are not constrained. They can ignore internal contradictions with a single word, reject data as illusion and dismiss complex technical problems with a poetic phrase. To the listener with a very limited attention span and a propensity for verbal dependence, vague terms are simple and preferable. Technical science is much too complex and takes so long to make a point.

The word "Being" is a focal point for the Maharishi's word game. From this diffuse reference, that combines the object property of nouns with the dynamic, changing, elusive characteristic of verbs, the Maharishi talks in circles. "Being" is described by him in *The Science of Being and The Art of Living* (1973) as "nonchanging yet changing" (p. 31), as a "state of absolute, being neither subjective nor objective" (p. 46). With an obvious paradox and internal contradiction, he states, "The Being is beyond all feeling," (p. 46). If it is beyond all feeling, then how can it ever be achieved?

"Being" is applied to everything from Karma to mind to senses to thoughts and to the levels of scientific discourse. "Being" is depicted within every conceivable form of human expression as some shadowy, ubiquitous background. The plasticity of the word "Being" achieves so many forms within the Maharishi's word sequences that it becomes worthless. If indeed Being is "unbounded by time and space causation" (p. 272), and is the source of all happiness (p. 24), then how is it really different from the myriad of other god concepts? If "Being" is another god concept, then the unique aspects of TM and Cosmic Consciousness are false.

Contradictions saturate the Maharishi's language. On the one hand, he states that it can be achieved through appropriate meditational techniques while within the same book he says, "It cannot be perceived by the sense or the mind," (p. 24, 25). These contradictions are not consequences of removing phrases from context, rather, they are characteristic of the entire format. To place the onus of these discrepancies upon the nature of

human language can never legitimize nor excuse the clumsy and absurd nature of the claims. If language is too diffuse to describe these "vast concepts" than any attempt to use language for their expression becomes an exercise in futility. If the impossibility is admitted by evoking language limitations, then why confuse, confound and con millions of people with sure sources of anxiety?

The final, predictable, last-ditch attempt to save wonder words such as "Being" and "Cosmic Consciousness," invariably takes the form: how do you know it's not there? As mentioned in earlier chapters, we do not know it is not there. But this statement is neither a source of proof for the wonder words nor a weakness in our argument. The same question, "How do you know it's not there?" can be asked for any series of non-specifiable object-processes. How do you know the universe is not a non-physical cesspool that cannot be perceived by the mind or senses? Can you prove there are no invisible, non-physical spirits that cause all the accidents of the world? Can you absolutely reject the probability that we are all blotches on some cosmic ass?

Proof by Paired Question-Answer

During the process of socialization, we learn to associate words with objects and, with more difficulty, processes. The most frequent operation associated with word-object pairing is the question-answer procedure. A child may ask, "What is a chair?" and the parent (pointing to a chair) says that is a chair. Later, as the child accumulates a repertoire of paired associations between words and objects, the parent does not point immediately to a three dimensional object but uses analogies or metaphors for explanation. The parent may answer a question like "What causes babies?" with a referent to animal reproduction or the old potent-seed-in-the-fertile-ground argument.

In the process of socialization, the human being is exposed to thousands of particular question-answer situations and, as a result, the mere *operation* of question-answer pairings becomes

reinforced or formalized as well. The person begins to expect, without thinking about it, that every question must be followed by an answer. No matter how nonsensical or unrealistic the implications evoked, any series of words placed within the structure of a question carries the expectancy of *some* type of answer. If an immediate answer is not forthcoming, then the human being, like any other mammal, displays the consequences of sudden disruption.

When human beings are exposed to sudden changes or disruptions in their reinforcement schedules (the patterns of responses required for rewards or avoidance of punishments), emotional behavior results. The emotional behavior generated is usually labeled "anxiety" or "aggressive," depending upon the situation and type of schedule influenced. For example, if a person is accustomed to receiving a Coke everytime a quarter is placed into the machine and he/she places twenty-five cents in the machine and receives no Coke, then he/she displays aggression and kicks the machine or cusses at it. Experiences of anxiety usually occur in situations where a cue associated with the later delivery of a punishing or aversive stimulus occurs. A common example would be the sudden cessation of students talking and reports of anxiety when a severe teacher enters the classroom.

Language works in a similar manner. Because of the constant pairing of question-answer situations, the person expects every question to have an answer. When no answer follows, anxiety or frustrative aggression is typical. For example, suppose every time a person has stated that he believes in God, other people have nodded and agreed (reward). Then suddenly, he attends a meeting and is told that he is wrong: God does not exist. A typical reaction is verbal aggression against the source of frustration. If the contents of the question involve very vague emotional concepts related to the person's concept of self, the survival of the self and the nature of the self to the universe, then similar lack of appropriate answers elicit anxiety.

Such questions are often phrased in a serial context to prove nonspecific or unverifiable contentions. A popular manipulation

used by a well-known evangelistic group whose main thesis is doom's day (which never seems to come), involves the empirical referent/non-empirical referent question-answer series. For their proof of god, the sequence is "Who creates a house?" Answer: "Man." "Who creates man?" Answer: "God." Since the reader is primed to expect answers both by his conditioning and the immediate presentations of the question, the immediate void of "Who creates man?" is filled. The person expects that something must be there to create man because after all there *must be an answer*. If the reader of this paragraph is like the rest of us, he may say to himself/herself, yes, I realize that all questions do not have answers, *but* after all something must have created man. What we understand conceptually is not always transferred to our general behavioral patterns, especially when emotional responses are involved.

Some questions are nonsensical. How many angels can dance on a pin's head? When will we go yesterday? When does a married bachelor die? What is the sound of one hand clapping? What did you look like before you were born? Did you go tomorrow yesterday? What does a square circle look like? The nonsensical nature can arise from the combination of contradictory words within the same question or with non-empirical (angels, tomorrow) referents within a quantitative format.

When associations become too vague and are not capable of even rudimentary operational definition, broad concepts like time or god can become indistinguishable from nonsensical questions. To the question, "What is the meaning of life?" the Maharishi insists that it is the simple search for happiness, but this is achieved "when the movements of the individual are in accord with the movement of the entire cosmos, the purpose of the individual is found in the purpose of the entire cosmos and the life of the individual is found established in cosmic life" (p. 249).

But what is the cosmos? The Maharishi states, "All knowing is he, all powerful is he, all blissful is he, almighty is he who dwells on the top level of evolution" (p. 270). Essentially, the entire operation is reduced to the age-old god concept dressed

in Eastern garb. No real questions have been answered, but a series of circular arguments have been generated. Ultimately, one is faced, somewhere along the semantic line, with the question: who created God? Before man wastes another thousand years chasing angels on pins' heads, perhaps we should consider the limitations of language.

Proof by Metaphor

The metaphor is one of the most important tools for labeling complex, detailed, massively numerical phenomena into verbal forms that the human perceptual system can understand. Without this helpful tool, mathematical abstracts would be beyond our everyday grasp and the mountains of data would remain only computer compost. Scientific metaphors include compositional structures typically classified as metaphors or similes. The phrase "Gamma rays cut through space" implies that gamma rays are sharp or pointed. The phrase "Life is like the wind" implies that it has an effect but cannot be seen directly.

Metaphors become important when one is studying general phenomena that may not be demonstrable directly by viewing the assumed elements composing them. Memory is presumed to be associated with some change in the cells (neurons) of the brain. However, there are billions of neurons with trillions of combinations. The numbers are well outside our conceptual analyses. Some simple model or analogy must be used as a guide for the study of this complex phenomenon.

Although metaphors are useful tools, they can be sources of misuse and unfounded extrapolation. Sometimes, metaphors become reified (given concrete existence within the phenomenon studied). Theorists who took Freud's id, ego and super-ego model too seriously began to look for ids, egos and super-egos in the brain. One well-known brain surgeon used the telephone exchange system to explain the complexities of the brain. At first, the use of the model opened discovery after discovery, but then he became shaped by the implicit chains hidden within the metaphor. Associated with the telephone ex-

change system theory is the concept of an operator, the person who connects all the communication lines. In the last years of his life, this neurosurgeon began looking for the operator within the brain, the small homunculus who controlled the "communication lines." His search for the operator became less and less rigorous and he began to imply God. He died a mystic.

Metaphors have great use in persuasive conversations. They can also be a source of false finality. If information is too complex and undecipherable to a given audience, a well trained speaker can say the complexities are *like* something simple and familiar to the audience. Alternatively, the speaker may use a metaphorical presentation that implies some simple image. For example, the brain may be described as "a processor of information, by transforming sensory impact into digital electrochemical codes." To describe this "gray raveled knot" briefly and simply, the speaker could say, "The brain processes and prints out information," thus using the metaphor of a computer. More simply, the speaker could say without reservation the brain is like a computer.

The false finality of the above metaphor and simile lies within the audience. Since they are not familiar with the massive numbers of complexities involved in brain research and cannot possibly fathom the laboratory-specific problems of the research, they are left only with the few words of description. Consequently, they may erroneously conclude, "I know how a computer works so since the brain works like a computer, I understand the brain as well." The tendency for this type of false-knowledge response is strong in laymen audiences. The next time you attend a special lecture on some aspect of science and the speaker says that the phenomenon with which he is working is like some everyday example, watch the number of heads that nod with apparent understanding. They have understood the semantic similarity because of language conditioning, not because of experimental or conceptual training. Following the easy listening of the evening, the person does not remember the statement "the brain is like a computer" but displays the ultimate conclusion: the brain is a computer. The analogy has progressed to an identity.

The metaphor-mania of the Maharishi is a conspicuous and persistent symptom. He has used metaphors and analogies of the ocean and of a plant's roots to defend and define the TM experience. All of these metaphors have contained the connotative theme of a vast central energy reservoir from which all power, form and substance emerge. Invariably, the metaphors are used as substitutes for lack of empirical knowledge or as replacements for a general absence of internal consistency within his theories. Tapping heavily upon the associations of Christ teaching parables (or metaphors and analogies) to the masses, the Maharishi has used these semantic manipulations to induce awe and to avoid criticism. Within the protection of an open-ended metaphor even the most gross conceptual inconsistencies can be hidden well.

The most common metaphor used in TM is the "mind is like an ocean" where thoughts bubble to the surface. Depth within the ocean is compared to the finer levels of thought in the mind. The active everchanging phase of the ocean represents the relative phase of being while the silent aspect of the ocean's bottom indicates the never changing absolute state of being, according to the Maharishi. Within his text, the ocean metaphor varies from a comparison to an identity. For example, he says, "*Mind is a wave on the ocean of Being,*" (p. 36) and "*A thought starts from the deepest level of consciousness and from the deepest level of the ocean of the mind.*"

Sub-metaphors or association themes are incorporated into the ocean metaphor as well. The novice TMers are compared to the diver who becomes more and more familiar with the depths of his own being as he repeats the penetration into the ocean depths. Each time the diver mixes with the warm water of the mind's ocean and softly penetrates the vast unknown of its depths, he comes closer to the source. Slowly, the diver begins to feel and experience the totality of Being as he swims closer and closer to the core of all creation.

However, after the mental orgasm of the last paragraph, when the readers stop drooling and their underwear is dry again, our same questions must be asked again. "What do all the heart-throbbing, self-erecting metaphors tell us about the behavioral-

biological-biochemical processes of meditation? Where are the scientific explanations that the Maharishi contends? Where are the experiments that test the validity of his metaphors? Do all these fantastic images prove the validity of TM? Alas, we suddenly awake from the Maharishi's daydream to find a great and irreconcilable difference between clever rhetoric and concise data.

The metaphor is a mistress to the man who uses her. When one breaks away from the mesmerismic flow of a single metaphor, an antagonistic explanation can be seen as well. If the new TMer must dive to deeper and deeper depths to find the true Being, would he not be crushed by the immense pressures of these depths? We could argue that the initiate doesn't know what is happening at the dark bottom, for centuries associated with monsters and deadly creatures. Can the TM diver become addicted to the hallucinatory nature of the dive, like a deep-sea diver who has mismixed his gas proportions? Would not all that is experienced at these depths be hallucinatory?

Perhaps the Maharishi was uninformed about the nature of ocean depths, for this metaphor can be used most effectively against his argument. Recent oceanographic data demonstrate that the deeper layers of the ocean are not always constant or absolute but subject to unpredictable turbulent local currents that can destroy the naive or fool-hardy diver. In some depths, in fact, the layers of water can be more turbulent, more unpredictable, indeed more hazardous than the surface. If one extrapolated the Maharishi's metaphor of the ocean, TM would be seen as a dangerous, suicidal exercise.

Now the clever pro-Maharishi thinker could counter-argue against the apparent danger of the metaphor's extension. He/she could say that surely there are dangerous consequences in the depths of Being, but are they any different from the surface of daily change? Is not the risk of possible extinction worth the goal of finding the absolute nature of Being? Since the mind cannot be destroyed, surely the loss of the body in pursuit of pure knowledge should be a minor cost for the absolute gain. On and on it would go with us extending the metaphor

in one direction and the Maharishi extending it into another.

Metaphors are not proofs of empirical observations nor are they necessary explanations for the mechanics of these observations. This important understanding is probably the greatest tool for the person studying human behavior. Without this cautious treatment of metaphors and poetic imagery, stories become substituted for facts, anecdotal cases become replacements for systematic data collection, and beautiful allegories become alternatives for the internal consistency of data-based concepts.

The metaphors of central energy reservoirs as portrayed in TM arguments are not unique. We have seen them before and no doubt we will see them again dressed in the vernacular of future times. In the past, this nebulous, fruitless concept was seen in Reich's orgone energy, Von Reichenbach's odyl force, and Freud's libido. Today, these same themes have crept into poor science and common language as aura forces, psychic energy and psychotronic matrices. Like chicken man, they propose to be everywhere.

Chapter 7

TM AS A RELIGION

Is a rose by any other name still a rose? One must ask this question every time a TM teacher or dedicated TMer insists that transcendental meditation is not a religion. Despite example after example and reference after reference, the committed TMer repeats "Tm is not a religion. TM is not a religion." If they did not already have the mantra, we might suspect that this repetition was their primary tool of meditation.

Much of the confusion arises from the relatively arbitrary definition of "religion." In the words of a generalist, religion is concerned with the deepest dimensions of human experience, especially with the problems of man's wholeness. TM might fit this criterion but so would the boy scouts and the afternoon bridge club. Durkheim is more specific in his definition of "a unified system of beliefs and practices relative to sacred things which unite into a single moral community all those who adhere to them." Implicitly, these beliefs include the ultimate struggle with death anxiety, the origin of life and the rationalization of chance natural catastrophies.

The differences between religions, sects and cults appear to be a matter of relative permanence and the degree of total life commitment. Religions are usually stable institutions within the culture (or anti-culture), have clear structural displays such as churches or special places or references, precise rituals routinely incorporated in the daily lives of the general public, esoteric knowledge known only to a few, a hierarchy of executive systems or orders and specifically trained people to maintain the entire system. The tenets of a religion are used by the

members of the culture to explain their existence in terms of the group, the world and the universe. Solutions to problems of self, from origin to ultimate and anticipated physical extinction, are weaved within the system.

Sects and cults exist as more transient social forms arising in response to specific types of personal or group privation. They emerge outside the traditional forms of expression and may be antagonistic to the existing order due to their fundamental role competition. Sects can be differentiated from cults with respect to their duration of existence. While cults involve maximum behavioral saturation for short periods of time, sects require partial or total commitment. Fads are frequently paired with cult formation and cultic relief. Although typically religious, mystical or paranormal in nature, some cults contain clear political considerations.

Whereas established religions within a social order are bound to traditional cultural expectations and reward/punishment schedules, the cults can respond to the nuances of social privation. During periods of sudden loss in job opportunity, unexpected decreases in social accessibility, clear cultural extinction, or an unusually high proportion of floundering youths, cults can swell into social movements overnight. Many of these privations may last for two to five years while others may last for decades. If the privations become sufficiently widespread, the society is ready for a wild-fire of sudden conversion.

Once inflamed with a hard core, dynamic and dedicated peer group, usually between the ages of twenty and thirty years, the cult can burst into the evangelistic phase. Under the direction of a parental figure head, typically 40 to 50 years of age and well scarred by several previous attempts, the cult expands. Grass-roots or word of mouth conversion techniques work well relative to dissemination over traditional channels, especially if heavy social insulation exists between the group to be converted and the standing order. Recruitment can become so feverish that the cult organizers are often flooded by squealing enthusiastic converts just waiting for the experience of relief from their various psychosocial ills.

However, cultophiliacs are fickle people. They are prone to conceptual gluttony and quick satiation. Easily saturated by the consequences of their high-powered, concentrated dedication to their new form of relief, these people soon tire of the cult. When the novelty wears off, the old aches and pains return once again. The old vague feelings of "There is something more to life" reappear, and they drift away towards some other form of sensation. The closets of these people are cluttered with astro-charts, old needles, pyramids, and pet rocks.

When the fire has died down and there is nothing left to consume, a few burning embers remain. If combustible material appears again, if another privation comes along, they could start another chain reaction. These hard core members remain to form the sect. Usually they have been dedicated the longest or have given major portions of their daily lives to the cause. To reject the cult now would be tantamount to indicting the total consequences of their lives. With their passion gone and fearing self-recrimination more than social ridicule, they become the silent perpetuators for the cause.

TM Transition Into Religion

TM began as a cult in the late 1960's responding to the personal privations of the post-hippie era. It promised relief from stress, better grades, easier money and a sure means of coping with that nasty ever-changing, intractable environment. The TM convert was not required to alter his life style in any way. No heresy was required, no rejection of spiritual values was implied. TM was a "benign" tool to help the betterment of mankind. As TM teachers said, "TM is not a religion. TM is not a religion." Perhaps they actually believed it.

During this period of development, TM showed all the characteristics of a cult. First, there was the exponential-like increase in enrollment. Millions flocked to receive personal peace and fulfillment for their daily lives. Other millions flocked because other millions were flocking. The fervor was amazing especially in the target areas of university campuses and high

schools where identity-crisis-confused youths were floundering.

TM was not specific in its general goals. Personal relief was the major promise while cosmic consciousness and god-realization were kept in the background. If the novice asked about the Hindu origins of TM, he received a glossed-over answer of simple denial. "Yes, the meditational technique had been derived from the Eastern philosophies, but there was no requirement to believe them"—yet. TM was a tool, special and unique for each person. Meanwhile, millions of initiates were exposed to the puja as they brought trivial gifts for obscure reasons to vague entities. They knelt before pictures of Eastern men and received secret nonsense words like ieng, iem, ienga, iema, shirim and shiring. But there was "no religion involved, just 'signs of respect'."

For the cult to survive the arousal spurt and mature into a sect or religion, TM had to offer more than just simple relief. It had to become a major portion of the TMer's life so that some form of long-term commitment could be maintained. TM by necessity had to offer explanations for the problems of self-identification, for the mysteries of the universe and by implication for the nature of death and self-dissolution.

This option was available for those who survived the initial months of conversion and was intended only for those who were sincerely interested. The faddist and cultophiliacs were discouraged. For the dedicated TMer, there were tapes containing philosophical ditties of the Maharishi. As one became more obliged to adopt his assumptions, the intensity of the Hinduistic philosophy increased and TM as a tool faded into childish obscurity. Cosmic consciousness, spiritual consciousness, Brahman Being and religious phrases taken verbatim from the Indian Sanskrits became central issues.

To some, who passed the personality criterion, an even greater dedication could be realized: they could be TM teachers. Similar to the priesthoods of early Catholic brotherhoods, positions within the TM hierarchy were offered on a "first come, first served" basis. These individuals were not offered mere teaching positions but glowing, governorships of the

Enlightenment. They were given the option to study near the Maharishi and to listen to his philosophy of the sciences and his concepts of the universe. Every aspect of a person's life could be included and immersed within the Maharishi's teachings.

Although it is supported by dedicated believers—who may follow for a life-time, TM, at this stage, is still a sect. If the Maharishi died or was discredited—like so many miracle men from the East—the sect *might* continue. Those who gave the most of their time would trudge on, insisting that the message was not wrong, only the man. After all, men are frail things, susceptible to the temptations of Swiss bank accounts and political power tripping. “But isn't the truth there?”

To survive, TM must be integrated with the social orders of the day. The Maharishi, obviously cognizant of this necessity, states in his book:

Whenever and wherever religion dominates the mass consciousness, transcendental deep meditational should be taught in terms of religion. Whenever and wherever metaphysical thinking dominates the consciousness of society, transcendental meditation should be taught in metaphysical terms openly aiming at the fulfillment of current metaphysical thought”

The social order of today's rich North American society is science. It is not surprising, then, considering the Maharishi's own statements that TM is presented as a science. The initiate is pounded with the word “scientific” until he reiterates it in sleep. Mounds of experimental data are offered as proof while dynamic scientists give testimonies of effectiveness. Even the term “science” is employed in one of the front names for TM: The Science of Creative Intelligence (SCI). Whenever possible, the potency of science is paired with TM.

TMers are amazingly forward about the fact that they are using science merely to attract converts. Science is used as an attractant, as a means to the end. Many of the traditional Hindu philosophies concerning homogeneity of forces, spiritual

transcendence, and the vague catch-all label of consciousness have been translated into what appears to be scientific equivalents. Terms like "vacuum," "quantum," "relativity" and other physical referents are used to legitimize the TM tenets. Psychologically, the ploy is interesting, for only a few words have to be substituted before the same concepts suddenly appear as a viable form of the Hindu world view.

Since science is being used to sell TM, the rigor it demands need not be followed. Words like "experiments" or "data analysis" become meaningless when they are intended only to legitimize assumptions already held. Within this context, controls do not have to be instituted, checks for experimental artifacts are not required, and actual faking of the data becomes "acceptable for the cause." After all, if the "data deviate from the basic philosophy of the Maharishi, certainly the data must be in error and not the philosophy." No matter how many fancy apparatus and technical staff people, science as a sales technique is a sham. Once again, sloppy science is used to sell trinkets.

TM as a Protoreligion: From High School to Hinduism

There are required procedures to insure stable capital and human resources for long-term TM survival. At present, TM has been changing into the protoreligion phase whereby clear attempts have been made to establish these resources. The TM organization has: (1) invested in land and buildings, (2) proliferated several front organizations, (3) reinforced the social hierarchy of ascension within the organization, (4) initiated programs to institute TM techniques within high schools, (5) contributed to intracommunity efforts through sponsoring good citizenship awards, and (6) elaborated a World Plan.

The capital investments of the TM organization are evident only by the purchase of universities, colleges, TM houses for local centers and the more recent acquisition of land for retreats. There is no clear evidence where remaining profits have been placed. Record books are of little value since large multi-

structured companies may have several books for expenditures and profits anyway. It is apparent that the TM organization has made a clear move to become firmly established through properties.

The purchasing of university facilities and of faculties is a clever social sell and religious move. Ivy-covered old buildings containing the traditional equipment of discovery have great social prestige and legitimization. By establishing itself within a respected social enterprise, such as university training, TM becomes less suspect. There is something comforting about large, stable buildings protected by brass plates etched with "TM Research Center" or "Laboratory for the Enlightenment of Man." By purchasing such property, the TM organization has declared it is here to stay.

Secondary gains of obtaining university land also facilitate acceptance of TM. By granting degrees in the Science of Creative Intelligence or other science-appearing courses, the aura of knowledge is complete. Lack of accreditation does not appear to detour second rate schools and rip-off organizations from giving B.A.'s, M.A.'s and Ph.D.'s in everything from metaphysics to out-of-body experiences. If TM universities want to increase the prestige of their graduates, perhaps they should call them doctors of divinity, that always seems to help.

TM has produced the following front organizations: the Spiritual Regeneration Movement (SRM), the Student's International Meditational Society (SIMS), Science of Creative Intelligence (SCI), International Center for Scientific Research, Maharishi International University (MIU), and World Plan Executive Council. Such proliferation and mild deviation in expression allows catering to particular group needs. In addition to tax advantages and bookkeeping ploys, a multiarmed organization can become engrained more easily within the social structure of the society. Like the roots of a tree—to use the Maharishi's metaphor about TM—the greater the number of roots, suckers and tentacles, the more difficult it is to remove the tree by sheer, brute force.

The social hierarchy within the TM organization has not

changed significantly since its days as a routine cult. However, the selection procedures appear to have become more rigorous since early TM teachers have frequently strayed from the Maharishi's side to begin their own movement or to turn state's evidence. The major hierarchy is still: low-level pleb-TMers, checkers (who check the pleb-TMers to insure appropriate ritual), TM teachers, select teachers (generally promised governorships of the Enlightenment), special members of the inner circle or planning council, and probably a strategist group. The latter position is only speculation since it is not publicized. But considering the clever social, sales and business sense of the organization, this position must exist, at least functionally.

At the head sits his Holiness, Pope Maharishi. The Maharishi still appears to control most of the movement's thrust. He is still the primary interpreter of the faith. All controversies, inconsistencies and contradictions within the TM tenets are referred to him. The Maharishi is still the source of new insights about the progress of TM and presumably has divulged only a small portion of the total world plan. TM research scientists still consult his holiness before major discoveries are released. Just the mere presence of Pope Maharishi appears "to produce purity of the air and cosmic inspiration." To date, face to floor has not been required.

The legitimacy of the Maharishi as head interpreter of the faith has no precedent within the organization. If the TM movement is to become a full status religion, some means of sanctioning the Maharishi's position must be completed soon. At present, the movement appears to be controlled centrally by the man. Following his death in another decade or so, assuming he is not assassinated by a disgruntled ex-TMer or sold to the Internal Revenue for twenty pieces of silver by a close TM teacher, the figure-head problem will become paramount. This facet of the hierarchy has not been discussed.

Institutionalization means long-term conversion of a population. An optimal way to insure long-term dedication is to "get them while they're young." This technique is not unique to TM, unfortunately, it is used by all major religions to insure

filled parishes, packed pews and overflowing tithe boxes. The TM organization has tried to infiltrate a few high school systems in the U.S. but has met resistance. Strategically, they should have attempted the coup while conversions were peaking and dedication was strong. Luckily, legislation, like science, takes time.

The attempt to incorporate TM into the school system was initiated by Senate Resolution 64. This resolution was submitted with the purpose of increasing public awareness of TM. The resolution asked the United States to recognize the "success of the science of creative intelligence in enabling the individual to experience his or her full potential." Essentially, the resolution lists the goals of the world plan: (1) to develop the full potential of the individual, (2) to develop governmental achievements, (3) to realize the highest idea of education, (4) to eliminate the age-old problem of crime and all behaviors that bring unhappiness to the family of man, (5) to maximize the intelligent use of the environment, (6) to bring fulfillment to the economic aspirations of the individuals and society, and (7) to achieve the spiritual goals of mankind in this generation. One hopes that even people who couldn't care less about social problems could see the clear orientation towards incumbent problems of this decade.

Unfortunately, for TM, "you can fool some of the people some of the time but not all of the people all of the time." Since TM was now evident as a clear protoreligion, resistance came from its competitors: other religions. A variety of religious groups, like the Coalition for Religious Integrity, were formed to contest this infringement upon the U.S. Constitutional provisions for Separation of Church and State. When the State Department of Education channelled some \$40,000 of federal funds into five school districts to foster TM training in classrooms, opposition flared.

In February 1978, U.S. District Court Judge, H. Curtis Meador, banned TM as a religion from the schools. Within the case, the religious nature of the initiation and the Hindu-oriented behavior of the teachers were specified. Several individuals

from within the old TM organization testified with respect to the religious nature of TM. As predicted, the TMers appealed the ban on TM in schools. The first attempt at school-implementation has failed, but to maintain itself as the religion proclaimed, it must try again.

A more recent TM promotion involves direct intracommunity support. Several political parties have used this technique by which nominations are given for the best citizen, dinners are given for community do-gooders, or awards are given for outstanding scholars, scientists and politicians. All such activities are sponsored by the organization. With enough money to support such economic investments, the political party becomes paired with the good guy.

Local TM groups have been active in this form of grass-roots group activity. Some have convinced mayors to proclaim TM week, in order to celebrate the contribution of TM to the community's well being. These are similar to celebrations of health weeks, union weeks and other tributes to established major institutions of the community. Other techniques have involved the nomination of local professors and politicians for awards of outstanding achievement. The minute such people accept the award, TM comes one step closer to accepting its award.

The World Plan concept allows for long-term anticipation of TM results and re-affirms the contention of solid dedication. Like other world plans from the Third Reich to the League of Nations, the specific tenets reflect immediate concerns but give purpose and stability for decades to come. By emphasizing that the Enlightenment will come to this generation, the Maharishi has placed the ultimate reward within the grasp of the entire population. Such discrete reward prediction generates high rates of response among converts.

The World Plan, Age of Enlightenment, and the Matrix of Governors of the Enlightenment are actually well constructed social organizations that could, if sufficient power were developed, be transformed into political cells of influence. The concept of a governor of the Enlightenment for every 1000

people in the world or some related fraction is an effective cell scheme. Similar suggestions of having TM teachers comprise one percent of the population are more cumbersome but commensurate with Maharishi's frequent evocation of the one percent solution for his phenomena. He claims that one percent of the population meditating reduces crime and that new TMers should be exposed only to one percent of what the TM teacher knows about the movement.

However, the World Plan presented to the public may not be the same as the plan being followed at present by the inner circle, assuming TM is like most movements at the protoreligious stage of development. In fact, some of the Maharishi's early works give evidence that other options are being considered. Deception of the general populace does not appear to be a general concern since the Maharishi has stated, "The public is only allowed to enjoy the result of the plan. The plan is revealed only to those who are concerned with carrying it out." (Meditations, p. 172).

Less direct evidence comes from the affidavits of ex-TM teachers. G. J. Randolph, for example, stated that the Maharishi considers the Western culture not ready for the fine points of higher consciousness and related Hindu-Sanskrit concepts. According to this report presented in the New Jersey District Court, the Maharishi predicts that the North Americans might reject the contentions of reincarnation, evolution into angelic forms and related teachings from the Upanishads and Vedas. Apparently, the undisclosed portion of the World Plan is neo-Hinduism.

Several religious organizations have pursued the Hinduistic aspect of TM. *A Christian View of Transcendental Meditation* by Roger Blackwell and David Anderson (1976), allocates significant portions of its text to the Hindu background of TM. It compares the initiation ceremony or puja to old Hindu customs and discusses the clear religious concepts of TM.

Apparently, the puja or initiation ceremony has three phases. The first part of the puja involves chants to be sung in Sanskrit while the initiate is exposed to the mantra ceremony. The

second phase involves the physical movements that include the various offerings including the handkerchief, fruits and flowers. An important part of the second phase is the TM teachers' contrived insistence that the initiate also bow before the altar. The third part of the puja involves singing hymns of praise and producing a "puja feeling."

Chapter 8

THE NEUROTIC BELIEVER SYNDROME AND TM

Are people with certain patterns of behavior or particular types of reinforcement histories more prone to becoming psychologically dependent upon TM-like movements? This question has been asked by psychologists who have studied the behavioral patterns of avid TMers. Despite data to the contrary, TM-adherents still commit themselves totally to the movement. Verbal statements such as "... well, I believe no matter what ... " are frequently made in the midst of skepticism and disbelief by others. Alternative explanations to the Maharishi's metaphors are rejected reflexively. Negative data, as one Ph.D. who admitted conversion to the movement stated "is impossible because it cannot happen." Such stringent all-or-nothing behaviors are not unique to dedicated TMers; indeed, they have occurred again and again within human society as various forms of neurotic belief.

The "neurotic believer" is a label applied to various human behaviors characterized by an excessive focus of explanation. People who display these behaviors use extremely simple explanations and rationalizations for the complex and unpredictable nature of the environment. Great emphasis is placed upon rote evocation of special metaphors in the place of contradictory evidence or conceptual discrepancy. Typically, these metaphors are emotionally charged and more poetic than realistic, such as "Consciousness is the totality of being," "All things that are bad are due to disharmony," "All that is good is god and all that is bad is devil," or "There is no death." Even the basic language structure of the neurotic believer reflects

the intense, simplistic dichotomy of the way he/she perceives the world. Because of the general nature of the explanations, specific refutation by data is almost impossible since the individual contains no repertoire for discrimination. When contradictory data are given, they are rejected as either fraudulent or are considered as "tests of faith."

Patterns of belief are normal characteristics of human behavior. Operationally, belief can be defined as the occurrence of responses that have not been tested or are not testable in the presence of particular stimulus situations. Although predominantly associated with statements such as "I believe. . ." or "I think. . .," belief statements do not require conditional phrases. Statements such as "God is everywhere" or "The universe is infinite but bounded" or "Mankind is basically good" are still forms of belief statements. Usually the subject of the belief statement—in the above sentences: God, universe and mankind—is subject to a great latitude of precise definition. These statements are emitted with minimum reference to any real basis in fact and with maximum emphasis upon emotional proof.

The difference between the normal believer and the neurotic believer is statistical more than absolute—quantitative rather than qualitative. Whereas the normal person might use belief statements only as a final recourse when other more empirical tests fail, the neurotic believer utilizes belief statements frequently and in place of more routine and obvious forms of "reality testing." Belief for the normal person exists in a very important, but discrete part of his semantics and everyday life. Belief saturates the semantic styles of the neurotic believer.

The neurotic believer defines, describes, dismisses and differentiates the environment within the context of a single non-empirical theme. In the case of a neurotic TM believer, the complexities and multifaceted aspects of society are seen as manifestations of "stress," that can be alleviated with enough meditation. Evil, adversity and all negative stimuli in general are seen as originating from this singular source. Similarly, cosmic consciousness is seen as the source of all connotations for goodness. Failure to follow or find this pathway is the

fault of the person involved. Counterarguments or questions of the absolute validity of these suppositions are considered superfluous. Often a vindictive sense of superiority arises in the neurotic believer whereby those who do not believe in the formulae for the universe are seen as inferior, stupid or unworthy. At times, these believers consider themselves supremely powerful.

Since the human being is heavily dependent upon parental support during early childhood when basic concepts and reinforcement schedules about the environment are developed, a predictable aspect of the neurotic believer's behavior is the child-like dependence upon a parent surrogate. The parent surrogate must display the omnipotent and magic-like behaviors reminiscent of the child's early conceptual depiction of the parent, who at that time did control its "universe." Particular characteristics of the parent surrogates vary in detail, but in general they are proportionally older than the believer and frequently show religious profiles, especially Christ-like clothes, beards or mannerisms. Within the presence of the parent surrogate, the neurotic believer reports feelings of "wonderful security," "transcendence" or "peaceful quiescence." Words from the surrogate are reiterated and enshrined by the believer as sources of cosmic understanding and universal validity. Like young children, they often imitate the behavior and speaking sequences of the surrogate, even though the meaning of the symbols are obscure.

The Believer's Methods of Avoiding Madness

At the source of the neurotic believer's behavior lies one of the most intense and pervasive physiological-psychological phenomenon that human beings can display: anxiety. Anxiety is associated with the anticipation of an aversive event and is manifested within the temporal interval between a cue associated with the presentation of an aversive event and that event. It can be a part of the person's experience history or it can be inferred symbolically. Since one learns by experience that unexpected events can be aversive, soon the lack of prediction

and the conditions of uncertainty become anxiety-provoking.

When it occurs, anxiety can range from situation-specific occurrences such as before an airplane trip, in a public place or during the period of funeral attendance, to a general and continuous sensation of apprehension. Not infrequently, the latter form of anxiety behavior is correlated with the subjective experience of futility and the feeling that "there must be something more to life." As a consequence of this continuously unpleasant arousal, the individual may spend significant portions of his functional life attempting to find "the something more to life." Popular literature is replete with these themes, from the *Snows of Kilimanjaro* to the *Valley of the Dolls*.

Anxiety can range in intensity from a just-detectable feeling of apprehension that something bad is about to happen although the bad is never really clear, to a massive incapacitating attack. At the most intense displays, the organism may show a variety of physiological symptoms such as flushing, sweating, chills, shortness of breath and loss of bladder control. Concomitant with these epileptic-like autonomic changes is the subjective experience that death is imminent. During these periods, the person may enter a do-loop of symbolic experiences that become intensified to the point that death is considered foremost and immutable. The feeling is pervasive and inescapable; any attempts of control seem to emphasize the person's incapacity.

Spontaneous events, especially those that are aversive and psychologically painful, are anxiety provoking to contemplate. Anxiety attacks that occur without apparent stimulus and with no "reason" open a Pandora's box of frightening possibilities—depending upon the person's symbol system for death, such as cancer or brain tumors. Consequently, attempts are made to explain the occurrence within some context, to dismiss it as a normal response to a situation that had been overlooked. The more aversive the event and the more anxiety-prone the individual, the more likely unrelated and even far-fetched explanations are used. The episode could be dismissed as a transient sickness or be blamed upon some personal scapegoat.

Technically, every second of life is uncertain. There is always

the possibility, though infinitesimal, that a meteorite could kill you as you read or that a microscopic leak in your heart will burst into a fatal deluge. Many people deny this possibility or acknowledge the extreme unlikelihood of the event, but there is always that possibility. This form of denial is not sufficient for some people. To them, the optimal way to eliminate the uncertainties of the future is to remove the source of the anxiety/unexpectancy altogether and to replace it with an infallible and unalterable pattern of "safe" events. By categorizing and contracting all possibilities into a semi-rational scheme of predictable labels, the anxiety provoking aspects of future uncertainty are eliminated.

The means by which these predictions are completed *must* be simple and easy to learn since very complex explanations—that strain the person's conceptual ability—are anxiety provoking as well. Experimental neurosis can be elicited easily when distinctions between a stimulus associated with very positive experiences and another stimulus associated with very negative experiences become marginally discriminable. To obviate this aversive and incapacitating possibility, the complexity of the environment must be eliminated. This operation is usually completed in three major steps: (1) reduce the multitude of complex possibilities to a few general words, (2) explain and predict all possibilities of these words in a manner so general that it is always applicable, (3) enforce the anxiety reducing characteristics of the explanation by some form of ritual and reiteration of the basic formulae including rote memorization and chanting of choice phrases.

The first operation depends mainly upon the use of oppositions: all events are classified beneath one of two extremes with no intermediate distinction. The dichotomies usually reflect the three continua of Osgood: an *evaluative* dimension shown by such oppositions as good-bad, kind-cruel, pleasant-unpleasant, a *potency* dimension shown by such oppositions as hard-soft, strong-weak and heavy-light and an *activity* dimension shown by such oppositions as slow-fast or active-passive. Optimal words would display strong positions in all three dimensions.

Examples of simplistic reduction would be the conceptual complex of Maharishi-meditation-cosmic consciousness-transcendence (acquired by simple repeated pairing of terms) is good /strong/active while the complex of society-stress-nothingness-death (again by clever pairing within sentences) is bad/weak/passive. General word formulae can be given to handle all events such as "Anything stated by the Maharishi is relevant, that which has not been stated is not relevant." Once the system is acquired, the neurotic believer can respond reflexively with minimum decision to the variety of perplexing and changing events of his environment.

The second operation involves anticipating all complications that may arise from the simplistic reduction. Since the consequences of the reduction allow a small number of basic labels, the combination of possibilities become relatively small and very finite. Statements like, "If you feel bad then you have not been meditating correctly" or "Aversive events are due to the negative vibrations of society" are *a priori* predictors of any day to day failure that may occur in the system. For more complex and long-term problems such as a person's death, the predictions may involve a frank denial of death altogether, assuming a proper alternative is followed. The implicit TM theme of death denial hinges upon the Eastern philosophical contention that the individual transcends physical deterioration through an unspecified form of consciousness-blending into the whole—whatever that means.

One aspect of the generalized futurism technique that has not been used by the TM movement is social-natural predictions as prognostics of human termination. Other evangelistic movements have cited many forms of human behavior such as "wars and rumors of wars" as prognostics of the world's end. As long as human behavior is displayed, these predictions are always applicable, although their usefulness is about as effective as saying, "Energy is everywhere," "The sun will rise in the morning," or "Sickness will be seen in the population." Aversive natural events such as earthquakes and floods, or infrequent (and hence unusual and anxiety-provoking) astronomical occur-

rences such as meteor showers and eclipses, are used in this context. By invoking an *anticipation* of these aversive events in the sentence structures, anxiety can be provoked. However, an option to reduce the anxiety is always given to members of the predicting group.

As the TM movement develops into a typical organ of the neurotic believer, greater emphasis will be placed upon the dichotomization of the environment into TMers and non-TMers with an invariable overtone of superiority. Greater emphasis will be placed upon imminent destruction in the future, unless specific aspects of meditational philosophy are followed. Invariably options will be given to escape death and personal annihilation by following the specific formulae in the philosophy. There will be less recruiting and more emphasis upon "developing" the members already present within the movement.

Maintained dependence upon simplistic explanations of TM-like movements follows the intense rewarding consequences of anxiety-reduction. Once the simple explanations are given and the uncertainty-anxiety of the future is reduced, the responses that preceded the anxiety reduction are reinforced. As a result, these responses are more likely to occur again, which further reduces the anxiety, until the neurotic believer begins to report the "sudden control over his destiny" or a "change in his life" or "Everything in his life now has meaning and order." Frequently, phrases such as ". . . surrendering oneself . . .," "moving along with the flow . . ." and similar metaphors of relaxation are used.

Daily maintenance of the anxiety-reduced condition is facilitated by simple motoric rituals and group affiliation. In the case of TM, the daily ritual serves not only as an initial source of anxiety reduction (so that the person becomes more and more prone to follow the TM philosophical schemes) but also as a means of reducing the mundane ups and downs that comprise everyday life. Group affiliation and comradeship, features that are usually absent in the individual who has had a history of existential anxiety and loneliness, further reinforce the TM themes.

The psychological straight jacket into which the person has

been conditioned is not apparent until he or she attempts to deviate from the basic premises of the explanation. While attending a party composed of his old peers, the convert may be confronted with a contradiction between his new beliefs and an alternative possibility. Although initially the person may admit to this option, the resulting resurrection of anxiety, suppressed since the acquisition of the new theme, is panic producing. The neurotic believer must again reiterate the explanation (chant words from the Maharishi) or engage in private soliloquy with the general theme of the self, society and TM, and rededicate himself/herself to the cause. The consequent anxiety reduction intensifies the adherence and the person becomes less and less likely to entertain new ideas. At the extremes of the straight jacket behavior, neurotic believers may avoid all stimuli that could evoke a challenge to the explanation. They may actually prefer to have books selected for them (hence avoid "temptation," i.e., confrontation), to avoid old peers and to spend their social time only with members of the movement.

The inability to control existential anxiety is the major problem of neurotic believers. These individuals must replace the unpleasant and incapacitating effects of daily anxiety by some simple model with infallible predictions. The background or reinforcement history of these individuals is typified by: (1) an ambivalent emotional response to existential symbols (death, life, self) and/or (2) a relatively unstructured environment that has suddenly succeeded a structured environment within which great predictability and parental dependency had existed.

Ambivalence towards particular stimuli is an expected consequence of environmental interaction. Some stimuli are systematically associated with positive reinforcements while others may be associated with punishment. In many ways, these stimuli are more easy to accommodate within the behavioral repertoire since the distinctions are clear and obvious. However, some stimuli are associated with both positive and negative associations. Parents are classic examples of ambivalent stimuli since they are the imminent sources of early frustration yet the intermittent sources of rewards. The approach-avoidance con-

troversty is intensified when the parents are the sole sources of maximum negative and maximum positive stimuli. Neurotic themes can be developed if the specific cues associated with reward are not discriminable from the cues associated with punishment.

Anxiety can develop when the ambivalent history is expanded to general, nonspecific themes or abstracts that, because of their diffuse nature, cannot be specifically extinguished or tested by discrete situations. Abstracts prone to intense emotional ambivalence involve extreme contingencies of nondiscriminate details. Death, self, the future, the self in relation to others and the self in relation to total time are examples of these abstracts. Great emotional perturbation occurs when these events have been associated with both extremes of various emotional labels. Evangelistic movements such as TM substitute different and homogeneous symbols. Death and self may be denied in lieu of some "greater" abstract such as Eternal Life, Being and Cosmic Consciousness; the finite temporal and spatial problems of existence no longer become relevant.

Individuals who have been dependent upon others for food, housing, and daily schedules of behavior, but then are placed suddenly in a situation where such fixed stimuli are absent, display a propensity for neurotic believing. The sudden stimulus change would include attending college, sudden death of parents, or moving away from home, especially for the adolescent or young person. Although at first perceived as an "escape" or "relief," the lack of structure and prediction become a source of anxiety and uncertainty.

Although sudden changes in structure most frequently precipitate this form of anxiety, similar responses can occur following long-term goal achievement. Individuals who have oriented their behavior towards the achievement of some social/personal goal, such as an advanced academic degree, business position or some other social level usually report a feeling of loss in initiative a few months after the goal has been reached. If the goal and the person's behavior have been intertwined, such that the person sees himself *as* an M.D. or the person sees herself *as* a

lawyer, then the consequence of the goal achievement may be an "identity crisis" as well.

New Self, No Anxiety

There are several reasons a person may seek relief within evangelistic groups. One of the oldest explanations suggests that the frustrated and depressed individual attempts to gain a new self image of himself/herself by repressing the old one and incorporating the new image available from the evangelistic group. The greater the difference between the old self and the new self, the greater the likelihood of transition. Many of the converts in the TM movement had followed the road of drugs, protracted sexuality and sometimes other meditational groups.

Generally, it can be said that the more desperate the person becomes, the more relief a movement can give and hence the more intense the attachment. Testimonies of hopeless situations before the practice of TM are plentiful within the movement's sell program. Similar reports are found in other movements. For example, one follower of the Maharaj Ji wandered through India searching for a goal and meaning to life. Encountering the least amount of frustration or disappointment in the daily routine, she felt depressed and wept intensely. Her depression ended following her conversion to the Divine Light movement.

Although few systematic studies have been completed, the correlational data clearly indicate a relationship between early drug use/abuse and conversion likelihood to TM movements. A major portion of the TM sell job has emphasized the technique as a beneficial replacement or substitute for socially (legally) undesirable expressions in marijuana and LSD usage. Although the TMers imply that large numbers of ex-drug users in the movement reflect the superiority of the technique, the possibility that certain individuals are more likely to entertain any new option of subjective manipulation exists. When the drug experience has been removed, due to either more stringent legal control or shifting peer group preference, these individuals would replace drugs with another type of dependency: TM.

Anxiety from the Semantic World

Considerable anxiety exists about the semantic world—what some clinicians call the world of meaning. This anxiety emerges largely from the conceptual abilities of man, mediated primarily by: (1) the high frequency of symbol manipulation (language) about events not present and (2) the experience of time or temporal order. From this symbolic capacity, human beings formulate certain concepts of their origin (Where do I come from?), purpose (What is the purpose of life?) and death (the terminal experience for everyone). When the time factor is added to these concepts (Have I always existed and will I always exist?), they develop into a behavioral paradigm that generates continuous low level anxiety. The problems, which some theorists have argued to be artifacts of language and symbolic behaviors, are so anxiety-provoking that societies have developed functional networks to accommodate them.

Religion is one of the networks by which the problems of identity are solved and the ultimate nature of death is confronted. In Hinduism, death is negated by depicting life as illusionary and merely a small increment in the continuous unbreaking cycle of birth-rebirth. Traditional Christianity does not use the circle analogy but instead alters the temporal component by assuming life as finite and afterlife in heaven/hell as infinite. In both religions, the distinct and terminal nature of death is denied and the anxiety about this ultimate and final aversive event is reduced. Within the TM movement, death is dismissed as an illusion and replaced by the true reality of "Being," "Happiness" and "Eternity." Presumably, meaning and purpose to life are given as one achieves god consciousness.

The degree of meaning evolves proportionally with the amount of TM practice and commitment. Novices are weaned by simple promises of fulfillment while veterans indulge in a variety of metaphysical speculations of a Hinduistic view of the universe. Initially, one is promised practical consequences from TM such as coping and adjusting to the stresses of society. As

the disciple progresses along the TM route, more metaphysical goals are substituted. The advanced meditator attempts to attain cosmic consciousness and unity with Being. At this point, the concrete goals of simple relaxation are no longer so simple. Despite the tired contention that "TM is not a religion," functionally, TM is a religious system that attempts to alleviate the anxieties of personal identity.

Transitional Anxiety

Psychological reality consists of the shared reinforcement patterns and shared behaviors of human beings. However, there are weak points within an individual's life, sometimes called transitional stages, where incongruities exist between the subjective world and psychological reality. An early form of this incongruity occurs in childhood when the individual conceives itself as the center of the universe. The initial discovery that his/her thoughts do not control the environment directly and that he/she is not the center of the universe is a frustrating and anxiety producing consequence for the child.

Adolescence is one maturational change correlated with psychological-physiological alterations that suddenly thrust the person from the psychological reality to which he/she has habituated. During this period, a person must leave one group and join another. This period of post-pubescent crisis is characterized by problems of career, marriage, economic stability and independence from parents. Such sudden changes should and do predictably initiate a variety of anxiety symptoms. Evangelistic movements address themselves specifically to these problems.

Followers of these movements are given structured environments with clear ethics to follow. Consistent patterns of behaviors are reinforced within the context of a family type organization. Work roles within main stream society are encouraged but only as a small aspect of the total movement. During this period of contact with the external world, various movements give different formulae for maintaining the proper in-

sulation. The Jesus Freaks seek to work within society without being a part of it. In TM, the rituals of insulation are involved within the periods of meditation and the gradually increasing socialization of the initiate. Suggestions for dress, language and themes of thought are given. In many respects, the Maharishi and the organization become the family surrogate for individual structure.

One important aspect of the neurotic believer's ability to handle anxiety in a complex environment is his subjective interpretation of autonomy. Uncertainty about interactions and manipulations of the environment produce anxiety subjectively experienced in some instances as the lack of autonomy. An autonomous person perceives himself/herself as exerting a certain amount of control on the environment. When this control breaks down, the person complains of a loss of autonomy and reduces the environment to a simple state where control can be assured. Autonomy problems, synonymous with independence in the midst of a complex environment, reach their maximum in the transition phase between late adolescence and adulthood. It is during this period that the neurotic believer, suffering from an acute atrophied sense of autonomy, will opt for the structured, reduced environment of the evangelistic movements.

The private behavior of the autonomous person is seen as willful, volitional or of being one's own master. This sense of autonomy and intentional behavior manifests itself not only by selective control of the environment but also by "letting go at will" to passive impulses. The autonomous person will also be able to act spontaneously and to submit to the will of others without any fear of elimination. These aforementioned characteristics of the autonomous person, i.e., a selective control over a complex environment, self-mastery and spontaneity, form the nexus of the neurotic paradox for the fanatic TM believer.

The problems of autonomy stimulate the neurotic believer to seek relief within an evangelistic movement. He negotiates an effective barter that goes something like this, "I will trade

you my autonomy, my independence, my obedience and a couple years of my life in return for a structured environment that will tell me what decisions to make, where to go and in some instances who I am."

*Unfortunate Consequences of Neurotic Believers
in Cult Settings*

The exchange of personal autonomy for a cult form of personal structuring of the universe shapes the person towards excessive group affiliation/uniformity and dominance by a leader who mediates the social structuring. These consequences can turn benign movements into totalitarian bodies within which individual freedom is lost and excessive group conformity controls. The long run loser is the person who has forfeited his autonomy since personal growth and self-actualization are smothered.

Individuals prone to these movements are initially classic neurotics who worry more than work, plan more than participate, and cower more than confront. Hypersensitive to criticism by others, they feel guilty for any form of sexual or hostile thought. But, when the incapacitating aspects of anxiety are reduced by adherence to some ritual or belief, these individuals experience the sensation of self-mastery and control. Once again, they feel as if there is something good in life and that they, by association, are also good.

Dedicated group affiliation becomes the climax of their self-fulfillment. Through the varied expressions of social activity, the neurotic believer defines and expands the input of daily existence. There are daily rituals to help pass the hours. There are group activities to maintain the warm sensation of worth. There are clear, specified goals towards which one can organize and structure the future.

The apparent heterogeneity and richness of life is a sham since it is based upon a singular reduction: the group. Through the slow shaping and correlative reinforcement within the group, the neurotic believer soon loses the ability to differentiate him-

self/herself from the group. The dictates of the group and the behavior of the individual become identities, even to the most trivial of daily activities.

Possibilities of group dismissal are sources of panic. The mere chance of refusal from the group, isolation from its activities or chastisement by the central core, can send the neurotic believer reeling into an anxiety crisis. Like medieval forms of ex-communication, the person fears for his/her self-concept, future, and where appropriate, soul. Such rejection would not be a simple loss of rewards and punishments, but a pervasive loss of personal identity. Even its vague contemplation must be avoided.

By fusing the group's identity with the person's definition of self, the group is perceived by the neurotic believer as the object of reference. The neurotic believer may preface remarks with the anonymous and safe plurality, "*We* think this, or *we* have found that." Individual decisions are neither spontaneous nor creative, but mere rote evocations of group rule. When the decision requires conclusion, not previously discussed by group rule or without apparent precedent, the believer may avoid the situation altogether or insist upon time to think about it.

The egocentric consequence of excessive group identity emerges with the invariable expression of superiority. One characteristic of ultraconformist groups is the belief held by its members that they are somehow superior to others. Within the enthusiasm of group dynamics, individuals may consider themselves better than non-group members who in turn are not eligible for basic rights of human behavior. Society has seen this concept before, from cannibalism to nationalism.

The symptoms of neurosis, hereto submerged within the security of complete group identity, rise again. Once again, the neurotic believer appears dynamic, witty, knowledgeable and humane. However, like before, he must never be challenged seriously. People who fail to grant the neurotic believer special privileges become objects of wrath and "I'll get even with you" type of responses.

At the extremes of this continuum, a neurotic believer

develops not only feelings of quiet superiority but also of invulnerability. Since the group, especially one with open-ended plans and expectations, appears to be a source of constant sustenance, the person may conclude that like the group he too is indestructable. Frequently, this feeling is fostered by the diffuse concepts of survival and energy carried by cult-groups. Since he/she concludes that "Being," "God," or whatever pantheistic perfusion is on his/her side, the survival is guaranteed by divine selection. Intoxicated by the possibilities of this conceptual immortality, the neurotic believer has been heard to say, "Nobody can stop us now."

Statistically, either by design or as a consequence of primate social behavior, single powerful members emerge to control ultra-conformity groups. Movements like TM and similar protoreligions that promise every aspect of life contained in a never-anxious-package, still maintain their guru or initial leader. However, as the movement grows in political and economic power, the leader's potency changes from that of mentor to that of an organizer and dictator of proper deeds. Small groups can be maintained by simple suggestion and personal interaction. By necessity, large groups must be controlled through social order.

To maintain this order, some form of obedience training is required. Since the neurotic believer has already adopted the structure of another person to maintain his/her behavior, obedience is neither repugnant nor noticeable. Reflexive responding to the leader of the group becomes a normal experience indistinguishable from self-volition. Neurotic believers interpret subtle suggestions from the leader as their own compulsions.

The whims of the leader become the neurotic believer's rationalization, indeed license, to commit acts that he/she would never have completed on an individual basis. Within the confidence of the leader's parental power, neurotic believers obtain the moral right for their behavior. "By cosmic consent, man's law can be broken."

Like the young child, the believer relies totally upon the leader for his/her existence. To the believer, the leader becomes

a constant source of dependence whose power is omnipotent and everywhere. The believer relinquishes his future, and beyond, to the leader.

As the addiction grows, the believer invests more and more of the daily ritual towards the leader. He or she prays to the leader or engages in fixed periods of semiworship. The believer may fantasize about personal or sexual relationships or sublimate to less conflicting roles. Slowly, the leader becomes interwoven within the daily fabric of the person's personality.

At the more severe stages of cult mania, the child-like themes of neurotic dependency become blatant. The clever leader fosters this dependency by using metaphors like "come my children and let us speak." Allusions to the parental nature of the leader, such as "his holiness" or "our father" are reinforced. The shepherd and the sheep change from parable to promise.

As in the young child, magical thinking abounds. The neurotic believer begins to think that the leader "can read his or her thoughts" or the leader can hear "conversations at a distance." Slowly, greater and greater irrational power is placed with the leader. Ultimately, the connection clicks: if the leader is omnipotent, can he/she control immortality?

Later converts who do not know the leader privately or who are not familiar with his/her human frailties, can only experience the emotions of expectancy and the awe of unlimited possibility. Against these massive floating feelings, triggered by rich metaphor and the basic human anxiety of the future, the person feels diminutive.

Supernatural or spiritual connotations proliferate the thoughts of later converts, who see the leader only at a distance. To them, the leader is a source of infinite power. But as the normal human feelings of hostility emerge towards the source of their identity, they begin to experience intense bouts of guilt and anticipated punishment. "Suppose the leader knows my thoughts and deprives me of salvation?"

Once within this semantic loop, the person is trapped by the terror of supernatural fear. With each deviation from the leader's whim or from the cult's commitment, the person's

own private behaviors punish and induce anxiety. In order to reduce this anxiety, the person must follow the leader's advice again. The fear of personal rejection becomes greater than the fear of death.

Where does one draw the line between good and bad leaders? What is the difference between a Billy Graham and an Adolf Hitler? What are the similarities between Charles Manson and Oral Roberts? Where are the differences between the Jones' and the Jehovah Witnesses? What happens when one separates the cluster of confusing details and suddenly sees that their methods do not differ?

Chapter 9

TM: TRIGGER TO THE PSYCHOTIC PRONE?

Although TM may be considered a “trigger” to the psychotic prone, it does not induce psychosis by itself. If a person is susceptible to psychotic breakdowns, the practice of TM could act as a precipitant or a catalyst to the psychotic episode. The nature of the TM experience and other similar meditative techniques (such as Zazen, a form of Zen Buddhism) can cause repressed material and intense ideation to appear, leading to an alteration in reality testing. Reality testing connotes both the sensorial as well as the psychological aspect of evaluating the environment. The psychotic person may become responsive to irrelevant stimuli that would usually go unnoticed by the ordinary person. These stimuli become incorporated into the altered framework by which he interprets the events.

The Problem of Psychosis

The term “psychosis” must be dealt with clearly and carefully. Although popular associations with the word evoke images of insane asylums, lunacy and raving mad men, the problem of psychosis is much more subtle and complex. Psychosis is not merely hallucinations, word salad, inappropriate affect or magical thinking. The psychotic person appears to have some cognizance that he/she is in constant danger of being annihilated or engulfed by other persons. For example, one psy-

chotic patient reported that before her psychotic episode, she was afraid other persons were able to turn her into a rock. After her bizarre behavioral periods typified by catatonic stupor, she reported the subjective feeling of being a rock. To ward off the anxiety that is associated with engulfment (or identity loss), the psychotic may withdraw from relations with others and become isolated. Often to protect his "self" the psychotic will display "false mask" behaviors. As a consequence of these behaviors, the psychotic may report that he has no identity of his own or that she derives her identity from other persons. This sense of falsehood can become so acute in some patients that they will report anyone can see through their transparent body or the body is rotting away.

A psychotic episode is determined and defined to a large extent by society rather than any absolute behavioral symptoms of the individual. Person A may display a rigid belief in U.F.O.'s and may actually engage in active campaigns of propaganda about their validity, yet still be considered normal and respectable. Person B may also display this belief in U.F.O.'s, engage in an active statement of conviction about their existence but, in addition, state that he is following "their" orders in his daily life. This person could be considered psychotic.

The distinction between the two persons lies not in the belief of U.F.O.'s, but in the pervasive effects of the belief upon their total behavior and the amount of reality testing. Person A, the normal individual, might display frequent U.F.O. content within his conversational behaviors. Other aspects of his life would remain relatively routine and average with the conventional explanations for sickness, adverse events or occasional rewards. Sickness would be the result of viruses and adverse events would be consequences of some scapegoat such as minority groups, capitalism or socialism. Positive events would be gifts of God, the results of hard work or of some related rationale.

The psychotic individual would extend the belief into many if not all aspects of life. Trivial and mundane everyday events become structured within the contexts of the U.F.O. belief.

Transient private experiences such as dreams, alterations in consciousness or the transition experiences between wakefulness and sleep would be interpreted as personal commands from U.F.O. occupants. Chance events would be considered gifts from the U.F.O. occupants and infrequent, odd occurrences would be described as signs that the U.F.O. occupants were present and looking over the person. Once the U.F.O. belief was incorporated into the person's basic themes of perception, logical refutation would become impossible and emotional behaviors would predominate. For example, the person may conclude that the U.F.O.'s make the sun rise and hence the proof that U.F.O.'s exist is evident every time the sun rises. Counter arguments would become impossible within the contexts of a developed delusional system. Counter arguments would be ignored or predicted as "tricks of the devil" or "tests of faith."

The relativity of psychotic labels is evident within subcultures as well. Whereas one group of people within the same culture may believe in one explanation of the environment, the same explanation within another part of the same culture may be considered inappropriate. A striking example of this phenomenon was the episode of a young man from rural southern U.S.A. In his hometown, the young man was praised and respected for his visions and prophecies from God. The people of the town, concerned for the welfare of the country, encouraged the young man to spread the word into the city. Shortly after arriving in the city to begin his apocalyptic mission, he was removed by the police and placed in a psychiatric hospital where he was diagnosed as a schizophrenic.

Despite frequent assurances by clinicians that the definition of psychosis is reliable and consistent, the demarcation for many criteria of psychosis are vague, arbitrary and misleading. Individuals who become notorious in this culture for their alleged ability to predict the future, receive the gifts and private adorations of even respected scientists. By this implied validity, they become models for similar behavior by the public. Yet the same behaviors displayed by some poor and obscure worker results in social derision and public rejection.

TM: Philosophy and Psychosis

At the basis of group philosophy and of individual psychosis exists the semantic man, the homo sapien faced with abstract and conceptual problems rather than the trivial and idiosyncratic details of everyday life. Both the philosopher and the psychotic attempt to solve these contradictions and complexities by their shared tool: language and the dynamics of its use. The consequence of this exercise produces similar patterns, not surprising, considering the shared nature of the processes involved that are diagnosed as world schemes in the one case and delusions of grandeur in another.

The philosopher speculates about the nature of the universe, the existence of gods and the laws governing men, with the conviction that following the conceptual confrontation his identity will be preserved. While grappling with what he considers mammoth issues, the fine line between personal identity and independent evaluation is maintained. The psychotic may speculate about the same issues but during the process of analysis, the distinction between himself and the issue becomes confused and vague. As a consequence of his speculation, he may conclude that he is the reincarnation of God or that he *is* the universe. It is here, within the fine discriminations of vague concepts, that the artifacts of language take their toll.

TM philosophy deals with concepts that preoccupy the philosopher and the psychotic. The TM view of the universe can be easily translated into autistic themes that compose many psychotic comprehensions of the universe. Withdrawal, "blending into the allness of everything," "becoming one with the universe" and even influencing large-scale physical events are ideas entertained by both the dedicated TMer and the psychotic. For example, one TM teacher told us that if enough people meditated in a particular city, the weather could be favorably influenced. As long as the person can pay lip-service to the TM tenets and distinguish conversational dedication from other aspects of his life, adverse consequences are unlikely. When the person becomes so immersed in the TM philosophy

that the personal identity is lost and concepts such as Being and "blending with everything" are substituted, the distinction between TM belief and psychotic belief, even with the most liberal interpretation, becomes obscure.

Symptoms of the TM experience are found beneath the heading of psychotic manifestations. The subjectively experienced increased energy, sustained euphoria and sensory hypersensitivity reported by thousands of TM followers are frequently prognostic signs for psychotic episodes. Silverman (1973), in a text edited by Fadiman and Kewman states that heightened sensitivity to stimulation is one of the primary characteristics of incipient schizophrenia and of LSD drugged subjects. The initial stages of the sensory experiences are marked by a period of mild to moderate euphoria. Silverman quotes one of Bower's subjects as saying: "One night, I woke up and started feeling good again. . . I felt alive and vital, full of energy. My senses seemed alive, colors were very bright. They hit me harder. Things appeared clear cut. I noticed things I had never noticed before." This passage bears striking resemblance to the experience of a representative TM follower in cosmic consciousness: "I can appreciate fully now. I'm just engrossed in whatever my perception falls upon. I feel I'm naturally seeing it for what it is. I remember looking at a tree and feeling how much more alive it was—it wasn't just wood, it was living. I could see the beauty of its creation in every shimmering pine needle, every piece of bark. I had passed by that tree many times in the past, but now it's a fresh perception every time I take a minute to look at it" (Bloomfield, et. al., 1975).

Another psychotic-like facet of the TM philosophy is the endowment of a "false self." This concept has been formulated by Laing (1969) and, although we may not agree with the epistemological foundations of his theory, the clinical observations are nonetheless insightful and subject to some verification. He views the development of the psychotic process as dependent upon the dichotomy between the "embodied and the disembodied self." Embodiment is the process by which all actions and feelings are primarily mediated by the body. "The embodied person has a sense of being flesh and blood and bones,

of being biologically alive and real: he knows himself to be substantial" (Laing, p. 67). In the position of the disembodied self, the person experiences his self as being more or less detached or divorced from his body: "The body is felt more as an object among other objects in the world than as the core of the individual's own being" (Laing, p. 69). Laing contends that the divorce of the self from the body deprives the unembodied self of any direct participation with the outside world. The body is felt as the core of a false self of which the disembodied self looks on with detachment, tenderness, amusement or hatred, whatever the case may be. Its functions are relegated to those of observation, control and criticism towards the body and its experiences. This schism between the body and some higher hypothesized self are the beginnings of the vicious schizophrenic circle leading to psychosis.

The role of the false self observing the body's actions is eerily reminiscent of the description of the role of Being in TM cosmic consciousness. According to official TM handbooks and to conversations with TM teachers, the self of the mediator becomes suffused with "Being" in the daily experience of transcendence during meditation. Once the mediator has reached cosmic consciousness and is established in "Being," the role of the normal self is reduced to an underlying presence during the arbitrarily designated three states of consciousness: waking, dreaming and deep sleep. The role of "Being" or the "false self" in Laing's terminology has been described by the Maharishi himself: in this condition, the person "... experiences the desires of the mind as lying outside of himself, whereas he used to experience himself as completely involved with desires. On the surface of the mind, desires certainly continue, but deep within the mind they no longer exist, for the depths of the mind are transformed into the nature of the Self. All the desires which were present in the mind have been thrown upward, as it were—they have gone to the surface, and within the mind the finest intellectual gains an unshakable, immovable status" (the Maharishi as quoted in Bloomfield, et. al., 1975, p. 117). Despite the attractive metaphors, the state of "Being" is a way to main-

tain detachment from the surrounding world. To the psychotic prone, this philosophy can be a first step towards deterioration.

The TM technique can be grouped with other meditative techniques (such as Divine Light Mission) as introversionist techniques. They allow the person to encounter repressed experiences and become aware of his psychological functioning. This is excellent for extroverted people who may feel they have no personality since they change and adapt to every new situation. The development of insight through the introversionist techniques can be rewarding for them. This same technique may be dangerous for an introvert since he already has a great tendency to focus upon his inner world. Usually, these persons are very self-conscious and further introversion may only aggravate the dysphoric depressions, ruminations and obsessions already present. (One only has to witness the works of Sartre, Kierkegaard, Kafka and Dostoevsky to appreciate the consequences of this orientation.)

When severe behavioral alterations do occur with TM initiates, TM teachers, governors of the Enlightenment or whatever status label is being used with each stage of the TM sell job, blame the person rather than the technique. Since the TM teachers are not psychologists and are not trained to evaluate or detect the subtle and complex aspects of human behavior, individuals may be given unwise instructions. Despite arguments that: "TM is always benign, there is no negative data in TM because there isn't any" and "if something bad happens with TM, it's not the method, it's the person," more and more cases are being reported concerning the untoward effects of TM or related practices. A few of these cases would be illustrative.

Meditation and Psychotic Triggering

The first case is of a middle-aged woman reported by French, Schmidt and Ingalls (1976). This woman had no previous experience of psychosis when she started the practice of TM. At first, she reported what hundreds of thousands of TM practitioners had reported; mainly an increase in energy, fulfillment,

growth and euphoria. She then began to experience what she called "waking dreams" where she experienced fantastic inner adventures outside of the TM session. Part of these adventures consisted of "relieving the world's tension by astrologically correcting a planetary gravitational imbalance that was deeply troubling the human race." A subsequent interview with this woman revealed a sustained euphoria, a lack of variation in affect and some dissociative processes as she explained: "I was not totally there. I was operating also on other levels and could not completely return to the here and now that you were experiencing." A dramatic shift in the nature of this woman's experience occurred whereby the sustained euphoria suddenly turned to unbearable dysphoria. The nature of the themes with which she had been dealing engulfed her in what she described as a "precarious balance." The woman then turned to psychological and religious literature of Maslow, Jung and the Maharishi in an attempt to explain her experiences. A complete state of physical and emotional exhaustion followed. Gradually, the symptoms disappeared in association with professional treatment.

The psychotic elements in this woman's case started after her initial experience of a moderate sustained euphoria. Her inability to grasp the TM concepts of universalism was manifested when she thought she was responsible for controlling the balance of the universe, by a direct self-universe relationship. The other psychotic element of a false self was seen when she was operating at "different levels" while talking to the interviewers. While the role of the TM technique cannot be directly ascertained in this case, it can be said that the TM philosophy supplied conceptual problems that engulfed the person, while the TM technique only aggravated the dysphoria associated with the introversion.

A second report involves a young man who had a psychotic breakdown after a yoga experience. Although he was not practicing TM but raja yoga (royal yoga), there are enough similarities between these two techniques to draw relevant comparisons. TM is a form of yoga (mantra yoga) and the experience of cosmic consciousness is similar to the 'samadhi'

experiences in other yogas. Furthermore, both techniques consist of the isolation or restriction of one or many sensory modalities.

This individual had been experiencing anxiety towards the world in general (existential anxiety) and had difficulty in overcoming the transitional stage between a vagabond adolescent lifestyle and a work role in an occupational milieu. After a somewhat unpleasant stay in the army, he found himself apathetic and indifferent towards civilian life. He engaged in various philosophical and religious speculations and undertook a "soul searching" journey which led him great distances across the European continent. Upon returning home, he lived in partial social isolation until he moved to the country to begin a hermit's existence.

Some friends introduced him to a guru with whom the man became deeply involved. During his meditation, experiences of clairaudition were reported. For example, he reported the cosmic sound of his master's voice in his right ear as well as other experiences of illumination. During this time, the man passed through "ups and downs" and felt like he was going to "crack up." Upon his parent's advice, he was admitted to a psychiatric hospital where he displayed a psychotic breakdown. Here he demonstrated such schizophrenic symptoms as somatic delusions (his body being eaten away) and depression with suicidal ideation. The psychotic elements in this case study were prefaced by his existential anxiety and withdrawal within himself. The psychosis, *per se*, probably started with the belief of clairaudition powers between the meditator and his guru. Psychotics are frequently preoccupied with the possibilities that other persons can read their thoughts. Similarly, they claim they can read or hear other people's thoughts. The meditative experience seems to have precipitated the onset of frank schizophrenic symptoms.

The third case was reported by Richard Johnson (1971) in a text concerning existential psychotherapy. He describes the case of a nineteen year old boy with fantastic religio-meditative experiences. The first stages of his meditative experiences were

described by the achievement of enlightenment, a term used by meditators to describe a pleasurable meditative state usually involving union with the object of meditation: "... but I was just so happy and carefree You know . . . I just didn't give a damn" (p. 71). The young man experienced his first "breakdown" when he was rejected by his guru. He had not been eating properly and believed he had jaundice and dysentery. These physical factors, added to the psychological strain of the rejection, precipitated the hospitalization. During the interview, it was discovered that he had sex with an Indian woman after which he believed his soul had changed to hers. He revealed that he didn't know what was "personal" about himself, what was right or wrong and even what was himself and not himself. He also had believed, until being "hurt" by the guru, that he was the second coming of Christ manifested through the Hindu religion.

In this case, clear clinical symptoms began after he had been "flying high" as a result of the meditation. When his master rejected him, the "bottom" fell out. With his "Christ-like" image of a divine being now shattered, he was left with no identity of his own. Under these conditions he took the identity of a woman's soul. In Laing's terminology, his disembodied self could not make the distinction between a reaction of the body, i.e., a sexual act, with the engulfment by another person.

The causal relationship between meditation and the psychotic processes cannot be ascertained directly in the last three cases. It is possible that these people may have developed the psychosis anyway, regardless of what behaviors had been involved. However, sufficient data have been collected over the years in the areas of psychiatry and psychology to definitively state that ambiguous stimulus situations, such as those associated with certain abstract philosophical and religious-like issues, can facilitate the psychotic episode. Frankly, certain individuals with prone reinforcement histories should be dissuaded strongly from participating in ambiguous, insoluble and emotionally-laden behaviors.

TM-like philosophies confuse the individual who has difficulty

discriminating fine semantic issues or difficult concepts, especially those with emotional loadings such as death, self identity and the future. Clever metaphors and semi-meaningless phrases do not help. These philosophies also offer the type of metaphors and delusional systems to which the psychotic individual is prone. Ideas about control of matter by thinking, floating in the air, invisibility, projection through space-time, mind migration or being god are replete within these systems. Such ideas are quickly recruited within the developing psychotic's repertoire and may add to the deterioration.

In this light, one challenges the wisdom of introducing alleged paranormal powers into the TM movement. According to basic Hinduistic and Bhuddhist views of nature, what have been called paranormal or parapsychological powers in the Western culture are normal and natural offshoots of the development of higher consciousness. The Maharishi shares this view and states that the continued practice of TM inevitably leads to the development of these faculties. Such paranormal powers are now a novel and central part of the TM sell job. Promises of invisibility, translocation, telepathy and levitation—phenomena whose reliability and validity are questioned in any practical sense, are now the incentives of TM conversion. Whether these powers are real and of any practical value (something more intense than significance at the $p = .05$ level) or are the tragic illusions and delusions that are a consequence of behaving according to TM philosophy must be determined by scientists *not* involved with the TM movement. In the very least, the promise of paranormal powers is a ready-made psychotic's dream.

Chapter 10

CONCLUSION

The historical and cross-cultural persistence of meditational techniques remains the most potent proof of their attractiveness. Human beings have used some form of meditation to survey portions of the self usually kept apart by the noisy, changing world of social interaction. Through the tried triad of silence, relaxation and repetition, rich and affective experiences have been reported for millenia.

From these simple techniques, human beings have reported cosmic meaning, transcendence of physical limitations and solutions to personal extinction. Subtended in a condition that fosters fantasy and the disinhibition of infantile modes of experience, meditators have found repeated confirmations of their introspective convictions. Death seems less aversive, life is given direction and the self emerges as an immutable entity.

The power of meditational techniques upon the personal references of importance and reality has awesome dimension. When deprived of the intractable, unpredictable external world, the early infantile illusions of omnipotence return. Those first primitive forms of experience, devoid of organized detail and filled with emotional meaning, are resurrected. Magical thinking, supreme quiescence and the epitome of egocentric evaluation, long repressed in that early twilight time by repeated frustration, emerge. Once again, the person becomes the universal absolute. The self and everything else fuse into the same.

Whether these effects are realistic representations with evolutionary implications or merely artifacts of man's convoluted

brain, is not clear. Certainly, the shared genetic background of human language and the homogeneous nature of four billion brains would produce some fundamental operations upon which cultural differences are imposed. If this is correct, then the validity of what is said will never be demonstrable since it would not exist outside the human species. Belief in gods, cosmic consciousness and mastery of physical limitations would be a species-specific illusion.

Clinically, the philosophical and methodological problems become less important in context of the perceived or real reduction in people's daily problems. From the criteria of coping, adjusting and integrating, the various techniques of meditation, from TM to simple relaxation to some of the more bizarre modifications, become useful. As long as their implementation is constrained to a specific tool of adjustment, without implied or contrived addiction to some larger belief system, the clinical value remains important. When this simple technique becomes a rationale for social manipulation, commercial exploitation and the abuse of scientific methodology, the danger becomes imminent.

Transcendental Meditation is an example of such potential. The movement pivots upon a simple meditational technique, used in myriad forms for centuries, proclaimed unique and supremely potent. Consequences of simple relaxation responses have been dressed in TM apparel and adorned with obscure philosophical implications. Clear commercial exploitation has occurred, regardless of intent or rationale, to foster these contentions. Since dissemination of TM is a professed prime directive, any tool can be used. Science, this culture's criteria of truth and reality, has been used as a sham for propaganda.

TM is not all good nor all bad. The problem is not that simple. TM is a complex social phenomenon within which many dimensions of human activity occur. Any evaluation must include the experimental, clinical, medical, social, philosophical, personal, and ethical components of measurement. On some of these scales, the results of TM may be rated highly while on others TM would fail to score at all. There are different dimen-

sions of human evaluation not capable of simple summation. Any single score of good or bad would be misleading.

In absolutes, TM is a trite component of the twentieth century. The claims made of its solutions to personal and social ills are really trivial. TM's final legacy will not be found in its promises but rather in its techniques. These same principles of human persuasion have been used by vast political machines and giant religious conglomerations to conquer peoples. Intoxicated by the wonder words from charismatic leaders, millions have found internal peace and meaning to life, but frequently at the expense of others. Peer group pressure, social stigmatization and total abuse of science, from Goebels to Lysenko, have been used for a "better tomorrow."

The Omnipotent Opiate

The manipulations performed by cult movements and their leaders upon the susceptible convert are common and persistent themes. The experiences reported by believers and cultists concerning "what the belief does for them" are repeated and frequent consequences. However, each person, ignorant of the history of these movements, feels a special sense of conviction that his/her belief is the true and only one.

These experiences can be found within behavioral procedures—any series of words and rituals—that results in the expansion in the sense of future time. Any series of words that promises or implies escape from personal death and the elimination of unpredictability can produce the cult mentality.

Time experience allows anticipation. Whereas other animals chain the periods between successive reinforcements with sequences of superstitious responses, man fills these periods with anticipation of things to come. Although these extrapolations also may be due to superstitious conditioning, their emotional impact can surpass the consequences of real and everyday stimuli.

Many experiments have demonstrated this common behavior. In one study (Aaronson, 1968), normal but suggestible subjects

were told that different portions of their time experience were modified. Such modifications are not unique to hypnosis but can occur following direct stimulation of the human brain.

When Aaronson told his subjects there was no *future*, subjects reported themselves in a boundless imminent present. They felt depressed at first but then became very stoic and “resigned to fate.” Some subjects were attracted to textures and colors and described mystical-type experiences. All subjects reported a reduction of anxiety.

No doubt the removal of anticipation reduces the necessity of anxiety. However the removal of expectation also removes motivation. Although the subjects reported no anxiety, they also had no sense of anticipation of pleasures. They demonstrated a sense of listlessness and general deterioration of complex ritual. The general theme appeared to be: why do it since there is no future anyway?

When subjects were told they had no present and no future, they felt hopelessly trapped in the past. All their neurotic conflicts and defenses reappeared with increasing intensity as the day progressed. Such conditions are typical of twentieth century people who have been taught to expect—directly or indirectly—global annihilation.

However, when the future was *expanded* by posthypnotic instruction, subjects responded with joy, anticipation and happiness. Deadlines became unimportant. Death, in particular, became merely the end to life rather than an event to be feared. Some subjects reported that they could concentrate better; they felt as if they were rich and full people.

Within the concept of an expanded future *and* an expanded present, many people reported a sense of the mysticism. A sense of unusual well being and an ability to think very clearly were experienced. These subjects wanted to concern themselves with only the most significant things and ideas.

This “pot-like” high was marred with a sense of intolerance. The burst of energy and enthusiasm associated with this condition was manifested in increased aggression and general intolerance towards interpersonal relationships not compatible with

the subject. In many respects, the grandiose nature of these conditions coupled with the burst of thoughts and delusions of supreme thinking, was typical of manic episodes.

The necessary thread of suggestibility that is woven through all of us can be pulled by the optimal stimulus at some time. This suggestibility is a consequence of normal individual development. Each individual derives the verbal labels—for his/her private experiences—from an outside, human source. This dependency upon another person's words cannot be eliminated totally.

Since the definition of "self" is coupled strongly to the person's learned labels for his/her experiences and perceptions, the manipulation of these experiences by the appropriate sequence of words can alter the person's concept of self. When the suggestibility is too strong and the optimal sequence of words occur, the person may never realize that a change has taken place. When the reference for a person's experience is altered, the change may never be realized (Persinger, 1979).

Conditions of social deprivation, economic conflict or simple maturation can predispose each of us, in the appropriate proportions, to the search for some omnipotent source of relief. Some parent surrogate with the optimal behavioral and verbal patterns can give us that brief moment of complete security.

Within the security of future resolution and of total explanation, anxiety becomes a forgotten nightmare. Euphoria, dynamism and an almost maniac condition prevails. The believer in a fixed future with personal promise enjoys ample time to experience life. Death is no longer some negative source, the ultimate cause of anxiety, but an anticipated conclusion.

There is a cost to be paid. While intoxicated by the euphoria of ultimate understanding, the person loses fine resolution. He or she can no longer discriminate the critical details that distinguish behavioral principles from prejudiced belief. The cultist no longer perceives the difference between conclusions based upon data and those derived from conviction.

In the trade-off between total believing and the difficult daily task of individual evaluation, the person no longer chal-

lenges fundamental questions. Slowly a core of taboos are formed to which all must believe without question. Over time, the infinite possibilities of individual challenge shrink into a pathetic and contrived ritual.

People outside the context of the cult are confused by what they see. Ultimately, they are forced to ask the question: if so many different, independent stimuli can produce the same cult mania, is the propensity for cult belief an instinctive property of human beings? Is it a peculiar necessity of the human brain's construction?

If the behavioral patterns evoked by TM by Coue or by Pentecostal prayer can be produced by hypnotic suggestion, are not the contentions of unique option false claims? If experimentally-induced or accidental stimulations of the temporal lobe produce the same profound experiences of great meaning and a sense of cosmic understanding, are these experiences persistent deviations of the normal human brain? Can they be controlled by words or subtle perceptions that we have not measured? Were these optimal patterns occasionally tapped, accidentally, by the great leaders of the past?

These questions must be addressed seriously by the behavioral scientist. As this culture enters the twenty-first century, the disparity between belief and daily technology will grow. Within an environment of complex gadgetry and almost infinite detail, belief has little role. Emotions are counterproductive to fine discrimination; they must be suppressed.

However, they do not disappear. Suppressed emotions and a proclivity to believe are common reinforcement histories. Under extreme conditions of denial or inaccessible modes of display, they form complexes of behavior that can control the person's usual behavior. Social conditions that promote dissociative behaviors, from rock concerts to revival meetings, are only precipitating factors. The epidemic can begin.

Some First-Order Protections Against Cult Mania

The basic themes of cult attraction and manipulation have

been discussed. Although they are obvious from hindsight, their contemporary existence is hidden cleverly within the vehicle of the day. By necessity, otherwise they would be unattractive to present problems or rejected reflexively, each new cult must contain a new vehicle immersed in a deceiving mass of details and sell routines. Following are some protective procedures that may be helpful. However, they are not infallible.

Beware of Wonderwords. Simple answers to complex problems, either indirectly or frankly stated, are great attractors. Cult mania feeds upon wonderwords used as solutions to these problems. Classic terms have been: Being, Self or Iness, Allness, God-consciousness, Cosmic Consciousness, Mankind and Infinity. They must contain the concept of everywhere and forever. Space-time must be saturated.

Wonderwords are used frequently and with great vigor. Consequently, they predominate the convert's language for a few months. As habituation occurs, new wonderwords must be substituted. To fill this vacuum, the clever leader offers another wonderword with more precise connotations. In this way, the cult can be slowly faded from its innocent beginnings to radical extremes.

Suspect Simple Answers. Young cults offer simple answers to all personal and world problems. Frequently the followers may deny this; however, listen to what they are really saying, not what they say they are saying. Slow and systematic evaluations of the claims of the young movement usually demonstrate a traditional theme: believe this simple thing and everything will come your way.

The simple answer strategy can be found throughout a cult's assumptions. Very complex and internally inconsistent problems, such as human experience, are broken into highly contrived and simple forms. Man's complex behavior may be divided into body, mind and soul or a similar ordinal arrangement. The problems (usually evils) in the world may be reduced to three (apparently) simple causes such as: nationalism, materialism and racism.

Despite the repeated, everyday evidence that clear prediction

placebo effect, the consequences of expectancy and peer group pressure. If these effects produce similar intensity changes in human believers within controlled experimental situations, then one must be suspect of cult claims.

Are the Basic Assumptions of the Theory Testable? The strength of theoretical claims can be evaluated by the number of testable hypotheses that can be generated from the basic assumptions. Can the wonder-words and belief phrases be translated into experimental formats where numbers are involved? In other words, is the word core of the movement defined by faith or fact?

Consider how many precise predictions can be made by the cult theory. If they promise an afterlife, what actual proof is there on a numerical level? When faith and your hard-earned salary are removed, what facts do you have that the predictions will be delivered? If they promise a solution to the world's ills, what actual proof is involved in terms of real data collected by people not in the movement?

A critical question to consider is: "How many other models explain the phenomena in question more rigorously? Does the cult theory explain, in realistic terms, the problems at hand (survival, death, world chaos or personal resolution) more precisely than other theories? If the claim of survival based upon death-bed reports can be more precisely explained and predicted on the bases of hypoxic alterations in the human brain, are the claims really valid?

Accurate predictions of future events are better proofs of a theory's validity. If the cult claims that belief in its tenets will give you special power, then ask for specific predictions that can be verified independent of expectation. If the cult insists that it is the savior for the world, ask for specific predictions of how this will occur. Answers like "it's a secret" or "for the benefit of man, we must keep it private" are rip-offs.

Can any predictions generated from the cult's assumptions explain or predict a phenomenon in more detail and with greater rigor than predictions generated by more acceptable assumptions? Are the predictions merely common sense? Can the pre-

dictions about the phenomena in question be generated by a completely separate set of assumptions that do not require blind faith and emotion?

Most cult tenets cannot compete with real data. The cultist cannot argue with the empiricist or with the experimentalist. As long as the observer stays within the context of data and the objective perspective of dispassionate methodology, the cult has little chance of success. Once the observer leaves the data and enters into the world of word games, the cult believer dominates.

Objective Viewing. Determine how the different cult phenomena appear when recorded by other procedures. Record the phenomena on film or view them in a more clinical perspective outside the personal enthusiasm of the group. Preferably use your own equipment or materials supplied by individuals not involved with the movement.

Personal presence within a cult phenomena is a precarious condition. Even the coldest scientist is still a human being who can be carried away by the emotion of the event. One is reminded of the scientist who, while watching some of the more bizarre claims of TM, felt as if "he had seen" levitation merely because others reported this condition. Later outside their ranks, he felt embarrassed that he, of all people, had fallen prey to the effects of peer group pressure.

Evaluate what cultists do, not what they say. The advantages of behavioral analyses in contexts of cult movements are clear. Since what a person says may have little to do with the stimuli that control his/her behavior, determine in simple terms—with no fancy words—what the person is actually doing. Isolate the consequences.

Sitting quietly and repeating a sound is a form of relaxation—no matter what other word is used to describe it. Killing an entire people is still genocide whether it is done for the sake of democracy or communism. Shared behaviors and social comradery are normal human behaviors; they are *not* special consequences of being the "selected few" or the "children of God."

Use the Method as Criteria. Since human beings, scientist or

scoundrel, are subject to daily whims and personal problems, more independent modes of evaluation are preferable. One of the most successful tools in this century has been the scientific method. Methodology and clear experimental designs allow objective determination of potential effects. The basic concepts of control, replication and verification are important fail-safes against innocent but erroneous enthusiasm.

By evaluating the methodology, the procedures by which cult effects are evoked, the misleading components can be reduced. By reducing the fancy words to actual stimuli and responses, a realistic appraisal of the phenomena can be found. Knowing the intricate mechanics of how a car functions does not detract from its beauty.

In the history of science, new principles and contributions have emerged from the massive accumulation of data. This accumulation has required precise understanding of methodology and experimental design. From the almost infinite set of collected numbers has arisen the technology of our comfortable everyday lives. Wonderwords and simple solutions do not build televisions or perform neurosurgery or send rockets to the moon.

Things to Come

TM and its variants are only the contemporary vehicles of the cult mania. Since the cause of the cult mania lies within the processes associated with parental dependency and the seductive pitfalls of emotional language, the potential for another epidemic is always very real. No doubt the precise details may change, but their themes and personal promises will remain.

Conditions of anxiety and global apprehension—no matter how large the person's world—breed an odd composite of fantasy and fear. Cults that promise perfect prediction, cosmic order and the complete relief of uncertainty are always there with an answer. Sometimes they are called TMers, Jones' cultists or radical Christians. Still other times, they may start innocently but then transform from a mute conglomerate of

pantheism and world brotherhood (such as the Bahai) into frantic cult conversion.

The present forms of cult mania will soon habituate. Those that are based upon novelty-jags and the stimulation associated with simple change must become more and more bizarre. Like TM, they must promise their followers more potent sources of irrational power. At some point, the credulity will be extended and the movement, except for the hard-core members, will collapse.

The followers of these movements will move on to more intense and odd events. Already this pattern has been appearing as the general catch-all for the irrational and the unknown: the paranormal. A decade ago, telepathy and clairvoyance could stimulate people to deep debate. Now these topics are met with casual acknowledgement.

During the last years of the 1970's, the potential cult convert has become obsessed with the bizarre. Popular interest in extreme topics such as spontaneous human combustion—whereby human beings allegedly burst into flames for no apparent reason—has spread. Hundreds of people insist they are the descendants of star people from other galaxies. Many feel they are connected to others as astral twins. Death-bed experiences are evoked as “proofs of survival.”

Extreme or unlikely events such as the death of two people with the same name in the same place—a necessary condition of probability—takes on special significance. Groups of people now wait for the landing of U.F.O. nauts to take them away to a promised land. Whereas a decade ago, the mere consideration of these possibilities would have been regarded as a sign of gullibility, people clammer for their understanding. The desensitization to the irrational and the bizarre has slowly changed us all.

If human behavior follows the patterns of previous centuries, we must expect a return to a more integrated and stable explanation of world view. No doubt, it must incorporate the information gleaned from the decade of the antinomian personality. The basic themes of “the global integration of mankind” and

“the orientation towards extraterrestrial goals” are expected, with one provision.

If by chance some singular intense, negative event occurs on a global level, such as a nuclear accident, a plague or a depression, the new or modified religions will quickly perish. A quick and intolerant return to the old and established concepts would occur. Strict adherence and swift punishment for non-believers would prevail.

Doomsday prophets would abound, each with their own proofs of “all have sinned and come short of their local god.” When the present is full of pain and death and the future appears no better, people usually choose the old and safe alternatives. Quietly, they relinquish what they have gained and return to the old and the tried. The past has already happened. There is no ambiguity there.

Movements such as the Jehovah Witnesses and many similar cults that venerate the distant past will become reinforcing. The simplicity of the past and the dependence upon a benevolent force will be the essential themes of control. Like the atheist who prays during an airplane crisis, no one will dare take the chance.

More likely, however, the complexity of stimuli and uncertainty will increase during the 1980's. The new religions and philosophies should proliferate. Revival mania is an expected movement that will precede the adaptation of these modified beliefs. Cult mania will take the blatant form of religion, without the commercial tapestry of TM. Conversions, again, will occur in epidemic proportions.

Orthodox religions will receive greater attention; they will be translated into the language of the day. Concepts of god and cosmic order will be expressed in acceptable metaphors. A clear blending of the Space Age concepts of spirit, omnipotence and omniscience with the traditional concept of an ambivalent father figure, will be likely. God will become a special combination of a wise, powerful cosmic intelligence.

The period of the next cult mania should peak between 1982 and 1984 for several reasons. These years are loaded with emotional expectations and subtle extrapolations of The End.

The date 1984, derived from George Orwell's book of the same name, is associated with foreboding connotations. The singular date has been stuck with the Western world for three decades.

Secondly, many revitalization movements, such as the Jehovah Witnesses, have predicted a terminal world condition during this period. Although these dates change after each prediction fails, they have been reinstated at intervals sufficient for the older members to forget (or die out) and for the younger members to deny. Each generation has its own Battle of Armageddon.

Thirdly, the period 1981-1983 is coincident with another sunspot maximum. Sunspot maxima are associated with both real and imaginary alterations in human behavior. Sunspot maxima have been paired with global cataclysms by mystics and by paralogic thinkers. Unknown diseases (that are always present) and predictable but periodic bouts or epidemics have become sources of immediate concern.

The general collapse of communication between the details of science and the gross labels of everyday language has fostered a nonchalant acceptance of astrological claims. To varying degrees, scientists and mystics have accepted the possible role of solar determination upon human behavior and the destiny of this species. The expected alignment of many of the major planets in 1982 has given credence to this expectation.

However, the most important contribution of the impending sunspot maxima to people's proneness to cult mania will be the alteration in world weather and climate. During the years 1981 to 1985, if this sunspot cycle is like the dozens of the past, there will be a statistical increase in unusual climatic and weather displays.

There will be increased numbers of excessive and violent storms. Thunderstorms will increase in severity and number. Tornadoes will become more evident. Since human memories are unreliable, these sudden changes will be sources of unexpectedness and potential death. Statements such as "Have you noticed how the weather is changing?" will become more than a geriatric preoccupation.

The anxiety will be produced by the qualitatively different

phenomena typically associated with sunspot maxima. An increase in strange events in the air and from within the ground will be reported. Luminous displays, falls of frogs, brilliant, colored skies and the myriad forms of electronic disruption will occur. These displays are necessary consequences of the interaction between the sun and the earth.

As before, these odd events will be sources of anxiety and potential terror. People will report them as if they are the singular prodromes to the end: to the occurrence of some great alteration in man's future. These events will be seen as signs of an uncertain future, because of man's ignorance of the same occurrences from times past.

Appendix:

TM DATA POOL

Basic Procedure

We have scrutinized the methods and results of experiments reported by the TM movement as proof of their effectiveness. The results of the various studies are summarized in this chapter. The actual experiments (followed by appropriate page numbers) can be found in simplified form within the handbook, *Results of Scientific Research on the Transcendental Meditation Program—Taught by His Holiness Maharishi Mahesh Yogi* (1976). More detailed descriptions of the experiments can be found in *Scientific Research on the Transcendental Meditation Program: Collected Papers, Volume I* (1976). The former document (or a modified version) is frequently used for popular distribution and is evoked as proof of the large body of scientific data existing to support the beneficial effects of TM.

The experimental procedures used to test the effects of TM have involved two basic formats: using the subject as his/her own control, or group comparisons. The typical procedure for the first format involves subjects resting for five or ten minutes with eyes open, then a similar period of time with eyes closed, followed by twenty minutes of transcendental meditation. Following the later operation, the subjects relax another five or ten minutes with eyes closed and then a final five or ten minutes with the eyes open. The measurements taken during the TM period are then compared with the measurements recorded during the initial periods of eyes open/closed, which presumably act as the “baseline” for the comparison. Optimally, with this design, each subject acts as his or her own control.

For group comparisons, measurements taken on subjects who practice TM are compared with measurements from subjects who have not engaged in TM practices. The major operation is the comparison of two separate groups, presumably the same in everything except for the TM experience. We have selected the term "non-TM group" instead of "control" since technically the reference groups used in most TM studies are *not* really controls for the procedures involved.

Although percent changes between groups or procedures can be misleading, percent differences between TM groups and non-TM groups or the TM periods and non-TM periods are given in order to describe relative differences. For data that involved absolute measurements (e.g., beats/minute), the TM values are always divided by the non-TM values. For data presented as percentage change, the TM percentages are merely subtracted from the non-TM percentages. Increased values indicate that the TM effect was greater than the non-TM comparison while decreased values indicate that the TM effect was less than the non-TM comparison.

Frankly, the reported effects of TM upon human behavior are trivial. Considering the alleged potency of the TM procedure, the changes in physiological and behavioral measures are conspicuously minute. It is only within the context of certain testing procedures that small changes become exaggerated out of proportion. People are overcome frequently by numbers and no doubt the systematic analyses of data can be boring. However, the TM movement has played heavily upon this format. Like a madman who goes about measuring everything in his path in order to prove that objects have length, avid TMers have used the scientific method.

Psychophysiological Results

A number of different experiments have demonstrated changes in cardiovascular, electroencephalographic, and muscle-related measurements. Experiments by Wallace (p. 22), Dhanaraj and Singh (p. 23) and Corey (p. 24) reported 8 percent to

10 percent decreases in heart rate during TM periods relative to earlier comparison periods in the same subjects. These changes corresponded to sixty-four to sixty-six beats/minute during the TM period relative to seventy to seventy-one beats/minute during the comparison period. Reddy et. al. (p. 77) found that athletes who averaged eighty beats/minute during a step test before beginning the TM program demonstrated a 10 percent decrease in heart rate when tested after engaging in TM behavior for 1.5 months. However, the control group, who did not engage in TM behavior, also demonstrated a 6 percent decrease in heart rate. Similarly, Routt (p. 55) found that although only a 3 percent decrease in heart rate occurred during TM relative to earlier comparison periods for the same subjects, the heart rates of TM subjects both before and during TM were about 14 percent less than those of a non-TM group. In all of these studies, only five to fifteen subjects were used per group. Although blood pressure does not seem to respond to TM treatments in normal subjects (Benson, 1975), one experiment by Benson and Wallace (1972) indicated that hypertensive patients demonstrated 6-12 percent drops in diastolic and systolic components.

TM studies concerning changes in blood chemistry have been oriented towards stress/anxiety-related measures, such as blood lactate and plasma cortisol. Increased levels of lactate are correlated with experiences of anxiety; when injected, lactate elicits anxiety responses. Increased plasma cortisol levels are known to occur quickly after a variety of different stimuli that are aversive or new to the organism. Blood lactate (Wallace, et. al., p. 29) and plasma prolactin, (Jevning et. al. p. 31), displayed 14-27 percent decreases during TM although the later measure dropped 10 percent in the non-TM groups also during ordinary relaxation. Plasma cortisol levels (Jevning et. al., p. 30) decreased during the TM period when the subjects were used as their own controls. A more impressive 50 percent reduction was evident when subjects who had practiced TM for thirty-six months were compared with non-TM group. Although no significant changes were found in thirteen different amino acids

in non-TM subjects or subjects who had practiced TM for three to four months (Jevning, et. al., p. 32), a significant 22 percent elevation of plasma phenylalanine only was found during TM periods relative to baseline measurements in the same session for subjects who had practiced TM between thirty-six and sixty months. It should be emphasized that the impressive long-term effect of TM on blood measures is based upon a single study.

Wallace (1970), Corey (p. 17) and Dhanarag and Singh (p. 18) reported 16-20 percent decreases in oxygen consumption in thirty-five subjects during the TM period relative to values measured for the same subjects just before TM onset; duration of TM history ranged from three months to several years. When ten subjects in two studies (Wallace, 1970; Bakker, p. 20) were used as their own controls, 12-25 percent decreases in breath rates were noted during the twenty minute TM periods; these subjects had been engaged in TM behavior for fifteen to thirty months. Routt (p. 55) did not find decreases in breath rates during the TM episodes relative to baseline values in his subjects. However, the TM subjects as a group, both before and during the TM ritual, displayed 17 percent less breathing rates relative to a non-TM comparison group; the actual values were 13.0 breaths/minute for the TM group and 16.0 breaths/minute for the non-TM comparison group.

Breath volume and airway conductance measures have been less systematic. Corey (p. 21) reported 5 percent less breath volume during the TM ritual relative to measurements just before TM onset. Reddy, et. al. (p. 78) found that athletes who had practiced TM for 1.5 months demonstrated an overall 8 percent increase in breath volume relative to an overall 3 percent increase in a non-TM comparison group. However due to the TM groups initially lower breath volume values relative to the comparison group, the actual difference between the two groups was only 2 percent. Corey (p. 56) found a 10 percent increase in air conductance while Honsberger and Wilson (p. 71) observed that 90 percent of their bronchial asthma patients reported decreased airway resistance following TM instruction; only 55 percent reported an actual reduction of symptoms.

Measures of skin resistance, also called the galvanic skin response (GSR) or psychogalvanic skin response (PSR), have been used in several experiments to monitor TM related changes. Decreases in skin resistance are associated frequently with subjective experiences of anxiety or emotional arousal, while increases in skin resistance are more associated with less "emotional" conditions. Recent data indicate that changes in skin resistance are more likely to reflect changes in the presecretory activity of the sweat gland cell membranes rather than the actual emergence of sweat (Lader, 1975), the former process being associated with a generalized sympathetic discharge from the autonomic nervous system to the sweat glands; sympathetic activity is a common correlate of subjective anxiety experiences. SSRR's or spontaneous skin resistance responses are sudden changes in skin resistance. Quite normal, they are measured as number of SSRR's per unit time.

Wallace and Benson (1972)) and West (p. 35) found significant 150 percent to 300 percent increases in skin resistance during TM behavior relative to the previous ten to fifteen minutes in subjects who had practiced TM previously; the actual baseline average measurements were 100 kohms and 45 kohms while the TM values were 250 and 180 kohms, respectively. Laurie (p. 36) found a less impressive 54 percent average increase (120 to 185 kohms) in ten subjects, used as their own controls, during the TM period. However, as a group, the subjects had higher initial (120 kohm) values than a non-TM control group (eighty kohm). Interestingly, Janby (p. 37) in a single session test reported a single subject who changed from 100 kohm to 420 kohm when practicing TM for the first time. It is not clear why some studies report immediate changes in GSR measures while others apparently require longer periods of TM history.

Similar patterns have been reported for the SSRR measures. Wilcox (p. 62), Berker (p. 63) and Orme-Johnson (p. 61) reported 37-50 percent fewer SSRRs in subjects during TM periods or between TM subjects during or before TM periods and non-TM periods or between TM subjects during or before TM periods and non-TM comparison groups. Berker (p. 63) reported that subjects used as their own controls required less

trials to habituate to a novel stimulus while Wilcox (p. 62) found that TM subjects as a group required less trials to habituate relative to a non-TM comparison group.

The EEG (electroencephalogram) is a gross measure of surface electromagnetic activities in the brain. Various electroencephalographic changes or "brain waves" are assumed to be associated with complex behaviors described metaphorically as "consciousness" and "subjective states." However, these correlations are by no means clear and may reflect more the limitations of language and descriptive labels for private behaviors (such as "thoughts"), rather than any discrete relationship. In general, TM practice seems to be associated with an increase in the lower alpha frequencies (eight to nine Hz), an activity band assumed to be associated with "free association" or "creativity," although similar patterns occur during certain types of epilepsy, brain damage, schizophrenia and normal developmental changes. The results of a single study (Haynes, et. al., p. 51) found a correlation of 0.71 between scores on a creativity test and a measurement of frontal alpha activity in "advanced" TM subjects. Increases in frontal alpha activity time have also been reported by Kras (p. 47).

One of the major points of the TM movement is the increased synchronicity of electrical activity, as measured by EEG instrumentation, both within and across cerebral hemispheres. A series of impressive diagrams by Banquet (1973) demonstrate the persistent occurrence of alpha frequency (in terms of percent time or total power involved) from several areas over the scalp. Although statistically quite significant, such complicated data analyses can be misleading since they are prone to exaggerated changes and erroneous inclusions due to muscle movements or inherent mathematical procedures. More recently increased similarity between hemispheres in the same subjects during the TM period relative to baseline periods was reported by Westcott (p. 46). The actual change in left hemisphere/right hemisphere ratios was 0.88 to 0.94 during TM for the experienced subjects while the non-TM group, who demonstrated a ratio of 0.84 anyway, did not show any changes during "rest periods."

Westcott (p. 47) also showed an increased hemispheric correlation of 0.7 for alpha frequency relative to 0.5 just before the TM ritual. Control data were not reported for this study in the popular handbook. Comparable increases in interhemispheric similarity have been demonstrated qualitatively by Banquet and Sailhan (p. 48).

The remainder of psychophysiological measurements involving allegedly unique TM effects involve muscular changes. Ten patients diagnosed with angina pectoris demonstrated 14.5%, 11% and 16% increases in duration of exercise, maximum work load and delay of ST depression, respectively (Zamarra, p. 72). No data were given for comparison groups or for patients who had been given a similar ritual. Running speed, distance jumped and agility test scores were measured in two groups. One group engaged in TM behaviors for 1.5 months while the other group did not. Re-test results demonstrated that running speed decreased by 2% in the TM group and 0.5% in the non-TM group. Distance jumped increased by 5% in the TM group, from 87.8 inches to 92.5 inches, and by 2% in the non-TM group, from 86.7 to 88.5 inches. Results of an agility test barely discriminated between groups since the differences in the TM and non-TM groups before beginning the TM program were as large as the differences in the TM group after the TM program. Sultan (p. 58) found that 15 non-TM subjects increased muscle tension (as measured by an electromyograph) from 10% to 23% over the 20 mV baseline during a task while TM subjects increased from 7% to 13%. Reductions in insomnia, gingivitis, and compensatory dreaming after sleep deprivation have been claimed in single studies; however, none of these have involved comparison groups who had received similar rituals except for TM content.

Behavioral Measurements and Questionnaires

The largest portion of TM support data is derived from the results of psychological tests and questionnaires. Such measurements involved anxiety tests, achievement tests, I.Q. tests, per-

sonality profiles, creativity tests, and self-rating questionnaires on some aspect of social behavior, such as drug consumption or satisfaction with employment. Although often statistically quite significant and impressive upon first inspection, the results of psychological tests or questionnaires should always be evaluated carefully. These tests have very large ranges of variability. Even though the averages between groups may appear large, the variation within the groups may actually overlap with each others' averages. Large variability may occur even within the same person. It is not unusual for the results of a person's I.Q. test to vary 10 points or more in either direction, depending upon the test, situational and motivational variables associated with test conditions. Consequently, the conclusion that groups separated by a few points are grossly different is often misleading (especially if some measure of variability is not shown) and of little practical significance. They may reflect the tricks associated with statistical treatment.

Statistically significant effects are more likely with psychological tests that involve scales with small sets of whole numbers (e.g., 1, 2, 3, or 102, 104), and no decimals since there can be a greater tendency for less variability within groups due to the fewer options of measurement. Since the measurement of the variance of the scores in a group is placed within the denominator in statistical tests, and the average of the groups are placed in the numerator, an artifactually decreased variance results in a lower denominator and hence a tendency for the ratio to be highly significant with such tests. In addition, differences between groups are often exaggerated when a scale of 1 to 10 is used to "measure" some subjective experience such as self-esteem or appreciation. The discriminative increment between such numbers is not equal. People are more likely to select the middle number or extremes rather than intermediate values. Again, statistical differences could be exaggerated.

Other difficulties involving questionnaires or psychological tests are the profound effects of the questions' phraseology and the precise instructions given to subjects. What is called the "demand characteristics" of the testing situation can account for

large portions of the test measurement differences between groups. For example, subjects are more likely to score higher on tests when they assume, due to either implicit or explicit cues from the experimenter or instructions, that some aspect of their own behavior associated with their "self-image" is being measured or tested. Some experimenters have called this variable ego-involvement. Other groups, who do not "relate" to the test situation, commonly display what is called "less motivated behavior." A questionnaire that contains predominantly positive questions such as "TM has been beneficial to me" has different response biases from questionnaires with equal numbers of positive and negative statements. A negative statement would be "TM is not the only means of obtaining relaxation." Subjects who are suggestible, for example, will have a significant tendency to choose more yes answers than no answers, regardless of the question content.

The major result of the TM data collected from psychological tests has been the demonstration of anxiety reduction (as measured by answers to paper and pencil tests) associated with the TM treatment. The term "anxiety" is a label applied with minimum rigor to a vast array of subjective and public changes in human behavior. Tests used to measure "anxiety" are quite popular, despite the fact that correlations *between* the various anxiety test inventories average about 0.31 (Levitt, 1967), which means that one can predict only about 10 percent of the variance about one test from another. Certain anxiety tests, such as the Manifest Anxiety Scale (MAS) are correlated highly (0.70 to 0.90) with neuroticism, psychasthenia and scores on the Psychosomatic inventory (Coffer and Appley, 1967). Typical questions on anxiety tests are, "I cannot keep my mind on one thing," "I sweat very easily on cool days," "I have nightmares every few nights" or "I am confident of myself" to which the subject must evoke a yes or no or true or false response. As mentioned, these tests are heavily influenced by the tendency for people to present themselves in "the best light," according to the demand characteristics of the situation.

More than six different experiments have demonstrated a reduction in anxiety test scores by TM subjects when used as

their own controls or when compared to some non-TM group. Ferguson and Gowan (p. 104) found that a non-TM group averaged thirty-eight units on the State Trait Anxiety Inventory (STAI) before a 1.5 month period and thirty-seven units after this time. The TM group initially averaged forty-four points and dropped to thirty-four points after 1.5 months of TM treatment. Although the TM group demonstrated a 23 percent reduction in anxiety score, this group had displayed scores 16 percent higher than the non-TM group *before* TM treatment had been initiated. Other studies by Shecter (p. 112), Nidich, Seeman and Seibert (p. 107), Stern (p. 108) and Ross (p. 109) have found reductions of 10-20 percent in anxiety scores between TM and non-TM groups. Lazar, Farwell and Farrow (p. 110) repeated anxiety tests as a function of TM practice duration and found that following an initial average of thirty-one on the IPAT anxiety test, the scores decreased to twenty-five, twenty-two and twenty after one, two and three months, respectively, of TM training. People who score highly on such tests (anxious people) demonstrated a greater reduction (from fifty to thirty-eight) in scores when given the TM ritual than those scoring lower (fourteen to ten). Not surprisingly, because of the heavy interaction between questions presumably measuring anxiety and those measuring "neruoticism," a number of studies have found reductions of "neurotic scores" following TM treatment. In fact, most of the categories from personality inventories reported to change with TM practice (e.g., Orme-Johnson, Arthur, Franklin and O'Connell, p. 101), such as reductions in hysteria, depression and hypochondria scales, are either heavily correlated or loaded with "anxiety factors."

Similarly, increases in factors associated with anxiety reduction are found in TM practitioners. Ferguson and Gowman (p. 103) found an increase from thirty to thirty-six on a self-actualizing scale following 1.5 months of TM while the non-TM groups changed from thirty-four to thirty-three. A group that had engaged in TM for forty-three months, and who did not have initial score values reported, displayed an average score of fifty. Comparable changes were found in spontaneity, self-regard and related scales.

Positive changes in "intelligence" scores and grade point averages also have been reported in TM experiments. Reddy, Bai and Rao (p. 92) reported a change in I.Q. scores from 103 to 106 in subjects practicing TM for 1.5 months. Tjoa (p. 100) reported similar increase, but only reported changes in scores. In that study, the non-TM group increased by three points while the TM group increased by 6.5 points. Although at first glance the score appears to have doubled, absolute I.Q. scores are three digit numbers (e.g., 100, 120); a change of six points would be trivial. The other I.Q. measure studies demonstrate similar difficulties. According to Kory and Hufnagel (p. 94), TM students averaged 76.6 G.P.A.s (grade point averages) relative to non-TM averages of 74.9. Collier (p. 91) and Heaton and Orme-Johnson (p. 91) found that students averaged 2.76 the semester before joining the TM program and 2.95 after joining the program.

On a recall test (paired association), Abrams (p. 87) found changes of 40 percent recall to 34 percent recall after TM practice for one month. Miskiman (p. 87) found that long-term, twenty-eight month meditators changed from 40-65 percent recall on a similar task. Increased ability to solve arithmetic problems/minute, from 15.8 problems to 17.6 (10 percent increase) have been reported by Miskiman (p. 89). Similar changes in perceptual-motor coordination tasks have been reported by Andrew and Rimol (p. 84).

TM experimenters have reported increases in creativity test scores for subjects with histories of TM practice. Operationally, "creativity" is a form of response generalization whereby a person responds to the same or similar stimuli with different combinations of responses. Usually some arbitrary criteria are used to evaluate the "usefulness" or "value" of the "creative response." Creativity scores usually decrease in anxiety-evoking situations or are lower for individuals with high anxiety test scores, regardless of previous treatments. On the Torrance Test for creative thinking, MacCallum (p. 112) found that forty-four meditators who engaged in TM for eighteen months showed scores of one hundred twelve, thirty-eight, and fifty-nine relative to non-TM group with scores of sixty-four, thirty-two and forty-

one on fluency, flexibility and originality components of the measurements. On another test, high school non-TM students changed from nine to 10.8 points while 3.5 month TM students changed from nine to 14.9 points. Like most of the TM results, the the absolute effects of the TM treatment are small but statistically significant.

The last major data core of TM effects involves changes in job satisfaction and drug usage. On a series of self-rating scales, Frew (p. 112) found that forty-two subjects who had practiced TM for eleven months demonstrated increased job performance and improved relationships with superiors and co-workers; the same subjects demonstrated a reduction in requests to change jobs and in orientation towards social climbing. Hashish use dropped from twenty times/month to less than three times/month after four months of TM treatment according to Brautigam (p. 137); although this author found similar decreases in LSD, amphetamine and opiates, the comparison was made between only ten TM subjects and ten non-TM subjects. A study by Katz (p. 139) showed that a TM program containing 150 group subjects dropped from 47-26 percent usage of marijuana after five months, a non-TM comparison group containing 100 subjects increased from 47-61 percent usage. Unfortunately, whereas the TM group lost 45 percent of their population sample, the non-TM group lost 68 percent of their sample; hence the last calculation was based upon only thirty-six subjects, a poor sample number for studies involving percent change.

In a retrospective study involving 1,862 subjects, Benson and Wallace (p. 136) analyzed the responses to questionnaires concerning drug usage. Before beginning TM training, 60 percent reported they used alcohol and 47 percent used cigarettes. After ten to twenty-one months of TM behavior, 30 and 20 percent of the population reported using these chemicals. These initial percentages are interesting in context of the type of population involved. According to Benson and Wallace, *before* the usage of TM, 32 percent of these 1,862 subjects reported using amphetamine, 78 percent reported the use of marijuana and 50 percent reported the use of LSD. After up

to twenty months of TM, the values fell to 5 percent, 25 percent and 7.5 percent, respectively.

The TM Data Interpretations and Conclusions

Major members of the TM movement, such as L. H. Domash, R. K. Wallace, and D. W. Orme-Johnson, who reiterate the Maharishi's statements, have attempted to shape wide scientific generalizations and expansive philosophical meaningfulness from the various TM experiments sparsely and superficially scattered throughout the immense and complex areas of physiological, psychological and social measurements. Interpretations of the data are couched within words such as "consciousness" or "pure conscious state," so diffuse and unspecific that they are of little empirical or scientific use. Like the words "god," "mind" or "self," these terms are loaded heavily with varying and vague associations. Consequently, when describing TM interpretations, we will use quotations since the statements could mean just about anything and should be set aside from more empirical labels.

In general, exponents of the TM movement have concluded that the type of data reported in this chapter demonstrate the existence of a "unique state of consciousness" in addition to the "extraordinarily deep relaxation." This "unique state of consciousness" is presumably stimulated most directly by "systematic daily experience of the pure consciousness state," otherwise known as TM. Such statements are made within the preface of the handbook issued for popular consumption: *Results of Scientific Research on the Transcendental Meditation Program* (1976), and are based upon the statistically significant but low level differences in EEGs, heart rates and psychological measures that can be evoked by a variety of different methods, including the mere repetition of the number "one" (Benson, 1975).

Initially, TM effects were explained in context of the deep relaxation associated with the process. Now the TM effects are considered "too profound" and "too wide-ranging" to be

“satisfactorily explained in this superficial way.” Instead, the TM technique is assumed to stimulate “the very basis of human growth and evolution” through a principle that “lies deepest in man’s nature, the expansion of consciousness.” Through TM, presumably a very simple technique, every aspect of daily life is vitalized. This change in life quality is assumed to be manifested in increased orderliness of brain activity and stability of physiological functions. These in turn result in increased “orderliness of thinking” and a “holistic development” of personality. As a consequence of these changes, psycho-social improvements occur, society becomes more orderly, crime rates decrease and everyone is allowed to develop full potential of mind and body; “happiness, harmony and fulfillment will be enjoyed in the daily life of everyone.” All of the conclusions and interpretations are based, supposedly, upon experiments that demonstrated 10 percent changes in heart rate, 30 percent changes in paper and pencil psychology tests and 40 percent changes in self-rating questionnaires.

A major emphasis in the TM explanation of the experimental results rests upon the “holism” concept, that is, one must look at the “whole” picture. “By considering the benefits shown by all the experiments together, a unified picture of the Transcendental Meditation program’s effectiveness in developing consciousness can be gained” (*Handbook*, p. 13). Such holistic approaches are admitted to be the standpoint of the Science of Creative Intelligence that “offers a complete and holistic theory of the evolution of human consciousness.” However, it is not clear how experimental changes in muscular activity or job satisfaction or improvement in gum disease (gingivitis) contribute to the development of “consciousness,” even when the word is used in a liberal context. Furthermore, a holistic approach can also mean a projective approach, or ink-blot procedure, resulting in the contrived organization of data. Any “form” or “clarity” would come from the expectancies and beliefs of the perceiver.

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